



Bid Number/बोली क्रमांक (बिड संख्या):
GEM/2024/B/4891601
Dated/दिनांक : 26-04-2024

Bid Document/ बिड दस्तावेज़

Bid Details/बिड विवरण	
Bid End Date/Time/बिड बंद होने की तारीख/समय	06-05-2024 18:00:00
Bid Opening Date/Time/बिड खुलने की तारीख/समय	06-05-2024 18:30:00
Bid Offer Validity (From End Date)/बिड पेशकश वैधता (बंद होने की तारीख से)	120 (Days)
Ministry/State Name/मंत्रालय/राज्य का नाम	Ministry Of Defence
Department Name/विभाग का नाम	Department Of Defence Production
Organisation Name/संगठन का नाम	Garden Reach Ship Builders And Engineers Limited (grse)
Office Name/कार्यालय का नाम	*****
Total Quantity/कुल मात्रा	1
Item Category/मद केटेगरी	MODULAR STEEL THROUGH TYPE BRIDGES (Q3)
Minimum Average Annual Turnover of the bidder (For 3 Years)/बिडर का न्यूनतम औसत वार्षिक टर्नओवर (3 वर्षों का)	270 Lakh (s)
OEM Average Turnover (Last 3 Years)/मूल उपकरण निर्माता का औसत टर्नओवर (गत 3 वर्षों का)	270 Lakh (s)
Years of Past Experience Required for same/similar service/उन्हीं/समान सेवाओं के लिए अपेक्षित विगत अनुभव के वर्ष	3 Year (s)
MSE Exemption for Years of Experience and Turnover/ अनुभव के वर्षों से एमएसई छूट	No
Startup Exemption for Years of Experience and Turnover/ अनुभव के वर्षों से स्टार्टअप छूट	No
Document required from seller/विक्रेता से मांगे गए दस्तावेज़	Experience Criteria,Past Performance,Bidder Turnover,Certificate (Requested in ATC),OEM Annual Turnover *In case any bidder is seeking exemption from Experience / Turnover Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer
Past Performance/विगत प्रदर्शन	80 %
Bid to RA enabled/बिड से रिवर्स नीलामी सक्रिय किया	No

Bid Details/बिड विवरण

RCM Applicable/लागू आरसीएम	Yes
Type of Bid/बिड का प्रकार	Two Packet Bid
Time allowed for Technical Clarifications during technical evaluation/तकनीकी मूल्यांकन के दौरान तकनीकी स्पष्टीकरण हेतु अनुमत समय	7 Days
Inspection Required (By Empanelled Inspection Authority / Agencies pre-registered with GeM)	No
Evaluation Method/मूल्यांकन पद्धति	Total value wise evaluation
Financial Document Required/वित्तीय दस्तावेज की आवश्यकता है।	Yes

EMD Detail/ईएमडी विवरण

Required/आवश्यकता	No
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ePBG Detail/ईपीबीजी विवरण

Advisory Bank/एडवाइजरी बैंक	State Bank of India
ePBG Percentage(%) /ईपीबीजी प्रतिशत (%)	5.00
Duration of ePBG required (Months)/ईपीबीजी की अपेक्षित अवधि (महीने).	24

(a). EMD & Performance security should be in favour of Beneficiary, wherever it is applicable./ईएमडी और संपादन जमानत राशि, जहां यह लागू होती है, लाभार्थी के पक्ष में होनी चाहिए।

Beneficiary/लाभार्थी :

GENERAL MANAGER
West Bengal, Department of Defence Production, Garden Reach Ship Builders and Engineers Limited (GRSE),
Ministry of Defence
(N.partheepan)

Splitting/विभाजन

Bid splitting not applied/बोली विभाजन लागू नहीं किया गया.

MII Purchase Preference/एमआईआई खरीद वरीयता

MII Purchase Preference/एमआईआई खरीद वरीयता	Yes
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MSE Purchase Preference/एमएसई खरीद वरीयता

MSE Purchase Preference/एमएसई खरीद वरीयता	Yes
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1. The minimum average annual financial turnover of the bidder during the last three years, ending on 31st March of the previous financial year, should be as indicated above in the bid document. Documentary evidence in the form of certified Audited Balance Sheets of relevant periods or a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid. In case the date of constitution / incorporation of the bidder is less than 3-year-old, the average turnover in respect of the completed financial years after the date of constitution shall be taken into account for this criteria.

2. Experience Criteria: In respect of the filter applied for experience criteria, the Bidder or its OEM {themselves or through reseller(s)} should have regularly, manufactured and supplied same or similar Category Products to any Central / State Govt Organization / PSU / Public Listed Company for number of Financial years as indicated above in the bid document before the bid opening date. Copies of relevant contracts to be submitted along with bid in support of having supplied some quantity during each of the Financial year. In case of bunch bids, the category of primary product having highest value should meet this criterion.

3. OEM Turn Over Criteria: The minimum average annual financial turnover of the OEM of the offered product during the last three years, ending on 31st March of the previous financial year, should be as indicated in the bid document. Documentary evidence in the form of certified Audited Balance Sheets of relevant periods or a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid. In case the date of constitution / incorporation of the OEM is less than 3 year old, the average turnover in respect of the completed financial years after the date of constitution shall be taken into account for this criteria.

4. Preference to Make In India products (For bids < 200 Crore):Preference shall be given to Class 1 local supplier as defined in public procurement (Preference to Make in India), Order 2017 as amended from time to time and its subsequent Orders/Notifications issued by concerned Nodal Ministry for specific Goods/Products. The minimum local content to qualify as a Class 1 local supplier is denoted in the bid document. If the bidder wants to avail the Purchase preference, the bidder must upload a certificate from the OEM regarding the percentage of the local content and the details of locations at which the local value addition is made along with their bid, failing which no purchase preference shall be granted. In case the bid value is more than Rs 10 Crore, the declaration relating to percentage of local content shall be certified by the statutory auditor or cost auditor, if the OEM is a company and by a practicing cost accountant or a chartered accountant for OEMs other than companies as per the Public Procurement (preference to Make-in -India) order 2017 dated 04.06.2020. Only Class-I and Class-II Local suppliers as per MII order dated 4.6.2020 will be eligible to bid. Non - Local suppliers as per MII order dated 04.06.2020 are not eligible to participate. However, eligible micro and small enterprises will be allowed to participate .The buyers are advised to refer the OM No.F.1/4/2021-PPD dated 18.05.2023.

[OM No.1 4 2021 PPD dated 18.05.2023](#) for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017.

5. Purchase preference to Micro and Small Enterprises (MSEs): Purchase preference will be given to MSEs as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail the Purchase preference, the bidder must be the manufacturer of the offered product in case of bid for supply of goods. Traders are excluded from the purview of Public Procurement Policy for Micro and Small Enterprises. In respect of bid for Services, the bidder must be the Service provider of the offered Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered product or service. If L-1 is not an MSE and MSE Seller (s) has/have quoted price within L-1+ 15% (Selected by Buyer)of margin of purchase preference /price band defined in relevant policy, such Seller shall be given opportunity to match L-1 price and contract will be awarded for 25%(selected by Buyer) percentage of total QUANTITY.The buyers are advised to refer the OM No.F.1/4/2021-PPD dated 18.05.2023

[OM No.1 4 2021 PPD dated 18.05.2023](#) for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017.

6. Past Performance: The Bidder or its OEM {themselves or through re-seller(s)} should have supplied same or similar Category Products for 80% of bid quantity, in at least one of the last three Financial years before the bid opening date to any Central / State Govt Organization / PSU / Public Listed Company. Copies of relevant contracts (proving supply of cumulative order quantity in any one financial year) to be submitted along with bid in support of quantity supplied in the relevant Financial year. In case of bunch bids, the category related to primary product having highest bid value should meet this criterion.

Section 9(3) Of GST/जीएसटी की धारा 9(3)।

Where ever RCM is applicable, sellers (Regular GST registered seller who opted out of FCM , unregistered seller, seller registered under composition scheme)will be forced to put Zero GST and GST cess in their bids. Buyer will have liability of paying the GST and GST cess to the government on the specified rate mentioned by them in this Bid.

Pre Bid Detail(s)

Pre-Bid Date and Time	Pre-Bid Venue
02-05-2024 10:00:00	GRSE BB GM(BB) OFFICE,61 PARK UNIT

MODULAR STEEL THROUGH TYPE BRIDGES (1 set)

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

Technical Specifications/तकनीकी विशिष्टियाँ

Buyer Specification Document/क्रेता विशिष्टि दस्तावेज़	Download
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Input Tax Credit(ITC)/इनपुट कर क्रेडिट(आईटीसी) and/ तथा Reverse Charge(RCM)/रिवर्स प्रभार (आरसीएम) Details

ITC on GST/जीएसटी पर इनपुट कर क्रेडिट	ITC on GST Cess/जीएसटी उपकर कर क्रेडिट	RCM Applicable/लागू आरसीएम	GST as per RCM/रिवर्स प्रभार के अनुसार जीएसटी	GST Cess 1 as per RCM/रिवर्स प्रभार के अनुसार जीएसटी उपकार 1	GST Cess 2 as per RCM	Optional RCM/वैकल्पिक रिवर्स प्रभार
NA	NA	Yes	18%	18%	18 (INR) - Per Unit	No

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	*****	*****KOLKATA	1	120

Buyer Added Bid Specific Terms and Conditions/क्रेता द्वारा जोड़ी गई बिड की विशेष शर्तें

1. Generic

OPTION CLAUSE: The Purchaser reserves the right to increase or decrease the quantity to be ordered up to 25 percent of bid quantity at the time of placement of contract. The purchaser also reserves the right to increase the ordered quantity by up to 25% of the contracted quantity during the currency of the contract at the contracted rates. Bidders are bound to accept the orders accordingly.

2. Generic

While generating invoice in GeM portal, the seller must upload scanned copy of GST invoice and the screenshot of GST portal confirming payment of GST.

3. Buyer Added Bid Specific ATC

Buyer Added text based ATC clauses

GeM BID NOB NO: GEM/2024/B/4891601 DTD. 26.04.2024

Job Title. **FABRICATION (INCLUDING PREPARATION OF FABRICATION DRAWINGS BASED ON DETAILED DESIGN OF GRSE), SUPPLY, ARRANGING INSPECTION INCLUDING TRIAL ASSEMBLY AT VENDOR'S YARD (INSPECTION AGENCY TO BE NOMINATED BY GRSE) ALONG WITH TRANSPORTATION UP TO GRSE'S NAMED PLACE OF DESTINATION, OF COMPONENTS OF GRSE DESIGNED STEEL THROUGH TYPE BRIDGE OF 60 MTR. SPAN HAVING 7.50 M CARRIAGEWAY WIDTH AND 1.50 M FOOTWALK ON ONE SIDE AND WITH ANTI-SKID STEEL DECKING; CONFORMING TO IRC 70R LOADING ALONG WITH LAUNCHING NOSE (WITH VENDOR'S OWN RAW STEEL, CONSUMABLES AND T&P) AND AS PER TECHNICAL SPECIFICATION AND DRAWINGS FURNISHED BY GRSE COMPLETE IN ALL RESPECT INCLUDING BUT NOT LIMITED TO PAINTING, METALIZING / GALVANIZING AS PER SPECIFICATIONS AND / OR AS PER DIRECTIONS GRSE.**

Tender issuing Dept. BB Purchase Dept, 61 Park Unit

List of Nominated Vendors:

- (i) **M/s. Goodluck India Limited, F 166/167, Goodluck House, Ambedkar Road, Nehru Nagar, Ghaziabad, Uttar Pradesh - 201001**
- (ii) **M/s. Vrinda Engineering Pvt. Ltd., 81B, Chittaranjan Avenue, Kolkata - 700007**
- (iii) **M/s. V.R. Global Pvt. Ltd., 23A, 11th Floor, Netaji Subhas Road, Kolkata - 700001.**

4. Buyer Added Bid Specific ATC

Buyer uploaded ATC document [Click here to view the file.](#)

Disclaimer/अस्वीकरण

The additional terms and conditions have been incorporated by the Buyer after approval of the Competent Authority in Buyer Organization, whereby Buyer organization is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any eccentricity / restriction arising in the bidding process due to these ATCs and due to modification of technical specifications and / or terms and conditions governing the bid. If any clause(s) is / are incorporated by the Buyer regarding following, the bid and resultant contracts shall be treated as null and void and such bids may be cancelled by GeM at any stage of bidding process without any notice:-

1. Definition of Class I and Class II suppliers in the bid not in line with the extant Order / Office Memorandum issued by DPIIT in this regard.
2. Seeking EMD submission from bidder(s), including via Additional Terms & Conditions, in contravention to exemption provided to such sellers under GeM GTC.
3. Publishing Custom / BOQ bids for items for which regular GeM categories are available without any Category item bunched with it.
4. Creating BoQ bid for single item.
5. Mentioning specific Brand or Make or Model or Manufacturer or Dealer name.
6. Mandating submission of documents in physical form as a pre-requisite to qualify bidders.
7. Floating / creation of work contracts as Custom Bids in Services.
8. Seeking sample with bid or approval of samples during bid evaluation process. (However, in bids for [attached categories](#), trials are allowed as per approved procurement policy of the buyer nodal Ministries)
9. Mandating foreign / international certifications even in case of existence of Indian Standards without specifying equivalent Indian Certification / standards.
10. Seeking experience from specific organization / department / institute only or from foreign / export experience.
11. Creating bid for items from irrelevant categories.
12. Incorporating any clause against the MSME policy and Preference to Make in India Policy.
13. Reference of conditions published on any external site or reference to external documents/clauses.
14. Asking for any Tender fee / Bid Participation fee / Auction fee in case of Bids / Forward Auction, as the case may be.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in the bid details field in Seller dashboard after logging in as a seller within 4 days of bid publication on GeM. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to such representations.

[This Bid is also governed by the General Terms and Conditions/ यह बिड सामान्य शर्तों के अंतर्गत भी शासित है](#)

In terms of GeM GTC clause 26 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to undertake compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with the laws./जेम की सामान्य शर्तों के खंड 26 के संदर्भ में भारत के साथ भूमि सीमा साझा करने वाले देश के बिडर से खरीद पर प्रतिबंध के संबंध में भारत के साथ भूमि सीमा साझा करने वाले देश का कोई भी बिडर इस निविदा में बिड देने के लिए तभी पात्र होगा जब वह बिड देने वाला सक्षम प्राधिकारी के पास पंजीकृत हो। बिड में भाग लेते समय बिडर को इसका अनुपालन करना होगा और कोई भी गलत घोषणा किए जाने व इसका अनुपालन न करने पर अनुबंध को तत्काल समाप्त करने और कानून के अनुसार आगे की कानूनी कार्यवाई का आधार होगा।

---Thank You/धन्यवाद---

Bid Corrigendum

GEM/2024/B/4891601-C1

Following terms and conditions supersede all existing "Buyer added Bid Specific Terms and conditions" given in the bid document or any previous corrigendum. Prospective bidders are advised to bid as per following Terms and Conditions:

Buyer Added Bid Specific Additional Terms and Conditions

1. OPTION CLAUSE: The Purchaser reserves the right to increase or decrease the quantity to be ordered up to 25 percent of bid quantity at the time of placement of contract. The purchaser also reserves the right to increase the ordered quantity by up to 25% of the contracted quantity during the currency of the contract at the contracted rates. Bidders are bound to accept the orders accordingly.
2. While generating invoice in GeM portal, the seller must upload scanned copy of GST invoice and the screenshot of GST portal confirming payment of GST.
3. Buyer Added text based ATC clauses
 - o **GeM BID NO.: GEM/2024/B/4891601 DTD. 26 APRIL'2024**
 - o **Job Title: Fabrication (including preparation of fabrication drawings based on detailed design of GRSE), supply, arranging inspection including trial assembly at vendor's yard (inspection agency to be nominated by GRSE) along with transportation up to GRSE's named place of destination, of components of GRSE designed steel through type bridge of 60 Mtr. span having 7.50 m carriageway width and 1.50 m foot walk on one side and with anti-skid steel decking; conforming to IRC 70R loading along with launching nose (with vendor's own raw steel, consumables and T&P) and as per technical specification and drawings furnished by GRSE complete in all respect including but not limited to painting, metalizing / galvanizing as per specifications and / or as per directions GRSE.**
 - o **Tender issuing Dept.: BB Purchase Dept, 61 Park Unit**
 - o **List of GRSE Nominated Vendors:**
 - o **1) M/s. Goodluck India Limited**
 - o **F 166/167, Goodluck House, Ambedkar Road**
 - o **Nehru Nagar, Ghaziabad, Uttar Pradesh - 201001**
 - o **2) M/s. Vrinda Engineers Pvt. Ltd.**
 - o **81B, Chittaranjan Avenue, Kolkata - 700007**
 - o **3) M/s. V.R. Global Pvt. Ltd.**
 - o **23A, 11th Floor, Netaji Subhas Road**
 - o **Kolkata - 700001.**

1.

4. Buyer uploaded ATC document [Click here to view the file.](#)

Disclaimer

The additional terms and conditions have been incorporated by the Buyer after approval of the Competent Authority in Buyer Organization, whereby Buyer organization is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any eccentricity / restriction arising in the bidding process due to these ATCs and due to modification of technical specifications and / or terms and conditions governing the bid. If any clause(s) is / are incorporated by the Buyer regarding following, the bid and resultant contracts shall be treated as null and void and such bids may be cancelled by GeM at any stage of bidding process without any notice:-

1. Definition of Class I and Class II suppliers in the bid not in line with the extant Order / Office Memorandum issued by DPIIT in this regard.
2. Seeking EMD submission from bidder(s), including via Additional Terms & Conditions, in contravention to exemption provided to such sellers under GeM GTC.
3. Publishing Custom / BOQ bids for items for which regular GeM categories are available without any Category item bunched with it.
4. Creating BoQ bid for single item.
5. Mentioning specific Brand or Make or Model or Manufacturer or Dealer name.
6. Mandating submission of documents in physical form as a pre-requisite to qualify bidders.
7. Floating / creation of work contracts as Custom Bids in Services.
8. Seeking sample with bid or approval of samples during bid evaluation process. (However, in bids for [attached categories](#), trials are allowed as per approved procurement policy of the buyer nodal Ministries)
9. Mandating foreign / international certifications even in case of existence of Indian Standards without specifying equivalent Indian Certification / standards.
10. Seeking experience from specific organization / department / institute only or from foreign / export experience.
11. Creating bid for items from irrelevant categories.
12. Incorporating any clause against the MSME policy and Preference to Make in India Policy.
13. Reference of conditions published on any external site or reference to external documents/clauses.
14. Asking for any Tender fee / Bid Participation fee / Auction fee in case of Bids / Forward Auction, as the case may be.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in the bid details field in Seller dashboard after logging in as a seller within 4 days of bid publication on GeM. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to such representations.

*This document shall overwrite all previous versions of Bid Specific Additional Terms and Conditions.

[This Bid is also governed by the General Terms and Conditions](#)

M/s. Garden Reach Shipbuilders & Engineers Ltd.
(A Govt. of India Undertaking)
BAILEY BRIDGE DEPARTMENT
61 Park, 61 GARDEN REACH ROAD, KOLKATA-700 024
Telephone: 033 2469-7164, Ext-326, Fax: 033-2469-1400/8150
Web site: www.grse.in, E-Mail: Thakur.Sayak@grse.co.in
CIN: L35111WB1934GOI007891

NOTICE INVITING TENDER (NIT)

M/s. Garden Reach Shipbuilders & Engineers Limited is a leading Warship Builders and Engineering Product Company, invites interested, reputed, resourceful and financially solvent contractors and subcontractors to submit **single stage two-part bid (Part I- Techno-Commercial & Part II- Price bids)** through e-tendering mode for the work package as per following bid document.

GeM BID NO.: GEM/2024/B/4891601 DTD. 26 APRIL '2024

Job Title: Fabrication (including preparation of fabrication drawings based on detailed design of GRSE), supply, arranging inspection including trial assembly at vendor's yard (inspection agency to be nominated by GRSE) along with transportation up to GRSE's named place of destination, of components of GRSE designed steel through type bridge of 60 Mtr. span having 7.50 m carriageway width and 1.50 m foot walk on one side and with anti-skid steel decking; conforming to IRC 70R loading along with launching nose (with vendor's own raw steel, consumables and T&P) and as per technical specification and drawings furnished by GRSE complete in all respect including but not limited to painting, metalizing / galvanizing as per specifications and / or as per directions GRSE.

Tender issuing Dept.: BB Purchase Dept, 61 Park Unit

List of GRSE Nominated Vendors:

- 1) M/s. Goodluck India Limited
F 166/167, Goodluck House, Ambedkar Road
Nehru Nagar, Ghaziabad, Uttar Pradesh – 201001
- 2) M/s. Vrinda Engineers Pvt. Ltd.
81B, Chittaranjan Avenue, Kolkata – 700007
- 3) M/s. V.R. Global Pvt. Ltd.
23A, 11th Floor, Netaji Subhas Road
Kolkata – 700001.

Note: "This notice is being published for information only and is not open invitation to quote in this limited tender. Participation in this tender is by invitation only and is limited to the selected procuring Entity's registered suppliers. Unsolicited offers are liable to be ignored. However, suppliers who desire to participate in such tenders in future may apply for registration with Procuring Entity as per procedure"

ARTICLE I. SCHEDULE OF CALENDAR DATES

SCHEDULE	
Pre-Bid Meeting	As mentioned in GeM Bid document
Bid Due Date	As mentioned in GeM Bid document
Bid Opening Date (Part I)	As mentioned in GeM Bid document
Offer Validity Period minimum	As mentioned in GeM Bid document

ARTICLE II. COMMERCIAL REQUIREMENT FOR THE NIT

FEES / DEPOSITS	
Security Deposit (SD)	5% of Order Value
PBG	10% of Order Value (not as per mentioned in GeM Bid document)
Liquidity Damage	½ % per week or part thereof subject to max 5% of the total value of the order.
Billing Frequency	On Completion of Job
Evaluation of L1	On Totality basis

ARTICLE III. ANNEXURE FORMS PART OF THIS TENDER

Annexure - I	Scope of Work / SOTR (Statement of Technical Requirement)
Annexure – I (A)	Technical Specifications for Steelworks Fabrication (TSSF)
Annexure - II	GRSE Standard Terms and Conditions (STAC) with Appendices - A to G (please refer www.grse.nic.in)
Annexure - III	Format for – Integrity Pact (please refer www.grse.nic.in)
Annexure - IV	Format for – Non-Disclosure Agreement (please refer www.grse.nic.in)
Annexure - V	Guidelines for submission of Bank Guarantee
Annexure - VI	Format for – Bank Guarantee Format for EMD (please refer www.grse.nic.in)
Annexure - VII	Proforma of Bank Guarantee towards satisfactory performance
Annexure - VIII	Format for Bond of Undertaking
Annexure - IX	Format for Indemnity Bond
Annexure - X	Bid Security Declaration

ARTICLE IV. DOCUMENTS TO BE UPLOADED (As applicable)

1.	Documents meeting the Technical Eligibility Criteria
2.	Documents meeting the Financial Eligibility Criteria
3.	Solvency Certificate from Banker
4.	Audited/Certified Annual Accounts and Annual Report for immediate last three years in support of Financial Eligibility.
5.	PAN /TAN, GST, Labour License Certificate, Registration Certificate of the Company with ROC
6.	Integrity Pact

- (a). Documents mentioned above to be uploaded as applicable.
- (b). Registered Bidders with GRSE need not upload para 9 documents if valid documents already submitted / available with GRSE Vendor Registration Cell.
- (c). Winning Bidder may submit ink signed hard copy of all above documents, prior to issuance of PO (as applicable)

ARTICLE V. DOCUMENTS IN PHYSICAL FORM TO SUBMIT (as applicable)

PHYSICAL SUBMISSION		
1.	Integrity Pact	(As applicable) by winning Bidder before placement of order

Above original Negotiable Instruments as stipulated, to reach to GM/BB, 61 Park Unit within stipulated period as indicated above (if Applicable) in a sealed envelope with tender number and job duly super scribing on it.

ARTICLE VI. JOB EXECUTION SCHEDULE

- (a). **Mobilization period including time period for completion of fabrication drawings and getting approval from GRSE:** 01 (One) month from date of LOI or Work Order, whichever is earlier.
- (b). **Project Completion Period:** The entire project is to be completed within 03 (three) months from the date of receipt of approved Fabrication Drawings.

ARTICLE VII. JOB EXECUTION

- (a). The job is to be carried out strictly as per SOTR, relevant drawings and specifications as indicated in **Annexure - I** with vendor's material.
- (b). The work is to be carried out by the vendor at their own premises utilizing their own resources and facilities including all consumables and labour at no extra cost.

ARTICLE VIII. WARRANTY CLAUSE

- (a). **Warranty of the job:** Applicable.
- (b). **Period of warranty:** 24 months from the date of completion of delivery at site.

ARTICLE IX. PRICE

Price quoted will be firm and fixed for the **entire period of contract**, till completion of work.

ARTICLE X. ESCALATION

No escalation whatsoever will be considered under any circumstances within the stipulated **period of contract**.

ARTICLE XI. UNREASONABLE QUOTES / ABNORMALLY LOW QUOTES

- (a). In case the price of L-1 bidder is found to quote unreasonably low and/or express desires to withdraw from the tender then such bid will be cancelled and punitive action will be taken in line with provision of **Bid Security Declaration** (Annexure-X).
- (b). However, in case the L1 bidder agrees to take-up the job with such unreasonable low quote, lower by 30% or more than estimate and also if the difference in price between L1 & L2 is 30% or more, then the quoted price to be analysed w.r.t. tender requirement and if the L1 bidder fails to justify their quoted rate, the obtained L1 quote will be rejected and the next quote will be considered as L1.

ARTICLE XII. OFFER VALIDITY

Offer is to be valid for **120 days** from the date of opening of Part-I bid i.e. Techno-commercial bid. Under exceptional circumstances GRSE may request for extension of price validity, beyond **120 days** against valid reason.

ARTICLE XIII. CONDITIONAL OFFER

Conditional offers w.r.t. SOTR will not be accepted. However, in case of bidder wishing to deviate on any/ same commercial Terms & conditions, then separate deviation statement has to be uploaded along with Part-I bid. However, GRSE reserves the right to accept / reject the deviations / bid with deviations after giving reasonable opportunity to the Bidder. If the deviation is acceptable to GRSE then suitable loading for such deviation on the price quoted by the bidder will be considered prior to determining the L1 price.

ARTICLE XIV. DETERMINATION OF L1.

L1 will be decided on Totality basis.

ARTICLE XV. OPENING OF BIDS

- (a). Part- I techno-commercial bid will be opened on the date declared in NIT. Part-II bid will be opened post techno-commercial evaluation by GRSE. Price bid of only those who qualifies techno-commercially will be opened. Opening date of Price Bid will be intimated accordingly to all qualified bidders. Disqualified bidders, either during technical assessment or commercial discussion will also be intimated about their non-consideration for further processing.
- (b). If any bidder qualifies for trial order, price bid of the bidder shall not be opened prior to successful completion of trial.

ARTICLE XVI. MICRO & SMALL ENTERPRISES

Purchase preference may be given to eligible Micro and Small Enterprise Firms, as per MSME Act provided, the tendered job is listed in their MSE document.

ARTICLE XVII. AWARDING JOBS TO MULTIPLE BIDDERS

NOT APPLICABLE

ARTICLE XVIII. ELIGIBILITY CRITERIA

The tender is limited only to the Registered / nominated / empaneled Vendors.

ARTICLE XIX. INSTRUCTION TO THE BIDDERS

- (a). Before submitting a bid, bidders are expected to examine the Bid Documents carefully, if they desire, may visit the work front, fully inform themselves of existing conditions and limitations including all items described in the Bid Documents. No consideration will be granted for any alleged misunderstanding or the materials to be furnished, work to be performed or actual considerations to complete all work and comply with conditions specified in the Bid Document.
- (b). Any qualified deficiency, errors, discrepancies, omissions, ambiguities or conflicts in the Bid Documents, or there be any doubts as to the meaning of a provision or requirement shall immediately brought to notice of GRSE Tendering Dept. in writing not less than 07 days prior to bid closing date.

- (c). It is understood that in receiving this bid, GRSE assumes no obligation to enter into a contract for the WORK covered by this bid request. GRSE reserves the right to reject any and all unqualified proposals or waive irregularities therein. GRSE reserves the right to evaluate each and every proposal and accept the whole or any part of the tender and the Tenderer shall be bound to perform the same at the rates quoted.
- (d). GRSE also reserves the right to reject any and all bids and accept the bid, which in its opinion, appears to be most advantageous to GRSE. Receipt and review of this Bid Request constitutes an agreement of confidentiality between GRSE and each of the contracting Firms preparing its Bid. GRSE reserves the right to change the form of this request to Bids, or make clarifications thereto, within a reasonable time before date of submission of Bids
- (e). Bidders objecting on any grounds to any bid specification or legal requirements imposed by these bidding documents shall provide written notice to GRSE within 10 calendar day from the day bid document was made available to public. Failure of a bidder to object in the manner set forth in this paragraph shall constitute and irrevocable waiver of any such objection.
- (f). Job is to be carried out as per SOTR and instruction of GRSE.
- (g). Any Drawings or technical information attached / provided with this NIT is the Intellectual Property of the Company and will be governed by the specific Act.
- (h). Bidder to declare in what capacity he is participating in the tender. As a PSU, Limited Co, Pvt. Ltd. Co., Sole Proprietorship, Partnership, Joint Venture, etc. Supporting documents confirming such status to be scanned and uploaded as attachment to Part I bid.
- (i). Bidder is allowed to submit only one Bid under any capacity / status.

ARTICLE XX. INDEPENDENT EXTERNAL MONITORS (IEM)

- (a). Either or both of the following Independent External Monitors will have the power to access the entire project document and examine any complaints received by him. In case of any change in IEMs, it will be informed accordingly.
- (b). The communication details of the IEMs are as follows: -
 - (i) Shri Bam Bahadur Singh,
Height-7; Flat No.1802, Uniworld City,
New Town, Rajarhat,
Kolkata-700160
Email: bbsinghbeml@gmail.com
 - (ii) Shri Pidatala Sridhar, IRS (Retd.)
Flat 2C, Kanaka Lakshmi Apartments
3-6-467 & 468
Street Number-6,
Himayatnagar, Hyderabad-500029
Email: sridharpidatala@gmail.com

(c). **Integrity Pact**

- (i) The Integrity pact essentially envisages the agreement between prospective vendors /Bidders & buyers committing the person/officials of both the parties not to exercise any corrupt influence on any aspects of the contract. Only those

vendors/ bidders who enter into such an integrity pact with the buyer would be competent to participate in the bid. The format of integrity Pact is enclosed with tender documents. Refer Annexure-18.

- (ii) The “Integrity pact on Govt. issued Stamp paper of Rs.100 duly filled as per enclosed format to be submitted in original. Bidders to ensure that every page of IP is ink signed with company seal/stamp in every page. [Please refer guideline for IP in STAC (SI.No.-1) in GRSE website/ Annexure-1 of the tender]
- (d). **E-mail address for communication:** Vendor to provide e-mail address to enable faster communication.
- (e). Difficulty in submitting the bid:
 - (i) Any query/difficulty in understanding of SOTR or other technical Terms, prior to submission of offer, may be got clarified from “**Mr. Sayak Thakur, Sr. Mgr. (BB-Tech), Email: Thakur.Sayak@grse.co.in , Mob: +91-9147111233 ” OR “ Mr. Sheikh Ahasan Behna, Manager (BB – Design & Proj. Co-ord.), E-mail: Sheikh.AhasanBehna@grse.co.in , Mob.: - +91-8981565735”.**
 - (ii) Any difficulty in submitting / uploading of e-tender or for any system help, may contact GRSE procurement cell, E-mail: mtl.eproc@grse.co.in Landline: 033-24893902

ARTICLE XXI. E-BID INSTRUCTION

- (a) To participate in the e–Bid submission for GRSE, it is mandatory for the bidders to get their firms registered with GeM portal <https://gem.gov.in>
- (b) It is mandatory for all bidders to have class – III Digital Signature Certificate (DSC) in the name of the person who will digitally sign the bid from any of licensed Certifying Agency (CA). Bidders can see the list of licensed CAs from the link <http://www.cca.gov.in>.
- (c) Bidders can view / download Part-1 (Techno-Commercial) bid documents along with all attachments in GeM portal <https://gem.gov.in>. They need to fill up the downloaded documents as per instruction and upload the same during bid submission. Non-acceptance of any techno-commercial criteria is discouraged. However, if there is any, it is to be commented accordingly and also stated in the separate deviation format.
- (d) Bidders need to fill up Part II (Price) bid online in HTML price bid format by inserting unit price only. No other attachment to the price bid will be reckoned
- (e) The amendments / clarifications to the bid document, if any, will be posted on GeM portal.
- (f) It will be the bidder’s responsibility to check the status of their Bid on-line regularly after the opening of bid till award of work.
- (g) **Amendment of Tender Document**
 - (a). Before the deadline for submission of tenders, the Tender Document may be modified by GRSE Ltd. by issue of addenda/corrigendum. Issue of addenda / corrigenda will however be stopped 7 days prior to the deadline for submission of tenders as finally stipulated.
 - (b). Addendum/corrigendum, if any, will be hosted on website / e procurement portal and shall become a part of the tender document. All Tenderers are advised to see the website for addendum/ corrigendum to the tender

document which may be uploaded up to 7 days prior to the deadline for submission of Tender as finally stipulated.

- (c). To give prospective Tenderers reasonable time in which to take the addenda/ corrigenda into account in preparing their tenders, extension of the deadline for submission of tenders may be given as considered necessary by GRSE.

ARTICLE XXII. BID REJECTION CRITERIA

Following bid rejection criteria may render the bids liable for rejection:

- (a) Bidder's failure to furnish sufficient or complete details for evaluation of the bids within the given period which may range in between two to three weeks depending on the deficiencies noticed in the drawings / technical data which shall not however conflict with validity period.
- (b) Incomplete / misleading / ambiguous bid in the considered opinion of the Technical Negotiation Committee (TNC) of GRSE.
- (c) Bid with technical requirements and/or terms not acceptable to GRSE / Customers / External agency nominated, as applicable.
- (d) Bid received without requisite documents, where required as per the tender.
- (e) Bid not meeting the pre-qualification parameters / criteria stipulated in the Tender Enquiry.
- (f) Bid with validity expiry date shorter than that specified in the Tender Enquiry.
- (g) EMD validity period is shorter than specified in the tender enquiry.
- (h) Bidders who have not agreed for the fixed price till the validity of the tender or have quoted the variable price.
- (i) Bidder not agreeing for furnishing of the required Security Deposit (SD).
- (j) Bidders not submitting Original instrument of EMD within 7 GRSE working days from the tender closing date.

ARTICLE XXIII. SUBMISSION OF BID

- (a) Last date of submission of Bid / Date of opening of bid is indicated in Tender Document. Tender is liable to be rejected if all the requisite documents are not enclosed with the Part I, Techno-Commercial offer.
- (b) Date of opening of Part II offer i.e. Price Bid will be notified to all Techno-Commercially qualified bidders in due course after conclusion of TNC/CNC meetings and acceptance of Techno-Commercial offer. After opening of e-Price bids, the techno-commercially qualified bidders can view the System Generated Price Comparison Sheet from their own portal.
- (c) GRSE reserves the right to accept / reject any Tender in full or in part without assigning any reason.
- (d) Acceptance Format Matrix should be filled up and attached with techno-commercial bid as marks of acceptance of NIT/SOTR/STAC. In case of non-receipt of filled in STACs acceptance format matrix, it would be presumed that you have accepted all our terms & conditions as per GRSE tender until & unless deviation is specially mentioned in offer.

ARTICLE XXIV. MANDATORY CLAUSE

Bids submitted by GRSE's competitors (i.e. those who competed with GRSE in any kind of tender enquiries) will summarily be rejected.

SCOPE OF WORK / SOTR (STATEMENT OF TECHNICAL REQUIREMENT)

CLAUSE NO. 1.0: BRIEF PROJECT INFORMATION AND SCOPE OF WORK

- (a). **Brief Project Information:** The site is located at KM 10.150 on Manchukha – Tongkorla – Yarlung Road in Shi Yomi district of Arunachal Pradesh (approx. 550 KMs from Dibrugarh)
- (b). **Brief Scope of Work:**
- (i) Preparation of detailed fabrication drawing along with BOM, based on detailed design drawing furnished by GRSE. Drawings will be available at GRSE's 61 Park Bailey Bridge Unit's Design Office for study prior to submission of bid. The fabrication drawings and BOM are needed to be validated by GRSE / GRSE's associate prior to commencement of fabrication.
 - (ii) Procuring raw materials for Steel Superstructure (IS 2062 E 350 C, where Plate sections (4 mm to 40 mm) account for 67% and rolled sections account for 28%) and Launching Nose item (IS 2062 E 350 B0) as well as for Expansion Joints.
 - (iii) Procuring all Bought Out Items like fasteners (H.T. Bolts Class 8.8 & 10.9 (M12 to M36) in conformity with EN-14339-4), Steel Crash Barriers on two sides as per H2W2 configuration in conformity with IRC- 119 and as per GRSE Drawings / Specifications.
 - (iv) Labour Charges towards fabrication of components (at Vendor's premises) of 01 (One) No. 60M span Steel Through Type (Road) Bridge with Steel Decking (including Expansion Joints and Launching Nose) as per drawings and specifications with all consumables. The scope also involves preparation of Jigs and Fixtures using Contractor's own material.
 - (v) Trial Assembly of entire 60 Mtr. Span at Vendor's Premises of the above bridge.
 - (vi) Surface Preparation along with Painting as per GRSE specifications / Indian Railways Standards (IRS: B-1).
 - (vii) Conducting Inspection by reputed Inspection Agency like RITES/BvQA/DNV-GL as per approved QAP. Required gauges for carrying out the dimension checks during inspection shall have to be arranged by Vendor.
 - (viii) Freight of fabricated components of the Steel Bridge and Launching Nose up to above referred site in complete knocked down condition.
 - (ix) Fixing of Bearings (06 Sets) on Abutments along with Assistance / Supervision during Erection / Launching of the Bridge at site in addition to fixing of Steel Crash Barriers (H2W2).
 - (x) **GRSE's scope shall be limited to furnishing of Detailed Design Drawings and procurement & supply of Bearings (06 Sets).**

The bridge (01 X 60 M) shall have the following characteristics: -

	Description
Type	Steel Superstructure, Through Type Bridge of span 60.50 Mtr. (C/C of Bearings)
Roadway Width (Curb to Curb)	7.50 M
No. of Lanes	Double Lane
Foot Walks	1.50 M on one side
Standards	Indian Standards IRC
Load Capacity	Class 70R as per latest revision under IRC-6-2017
Steel Structural material	IS 2062 E350 C for superstructure and IS 2062 E 350 B0 for Launching Nose Structure
Deck	Steel Deck with steel durbar plate
Bolts and Fasteners	In accordance with EN10204 or equivalent
Clear headroom height	5.50 M
Height	7.50 M
Total width	9.00 M
Total Weight of the superstructure (Approx.)	245 MT (Out of which 179 MT is for Plates sections; 62 MT for rolled sections like Hollow sections and H-Beams) & 4 MT for Fasteners
Weight of Launching Nose Structure (Approx.)	65 MT (Out of which 30 MT shall be for Plates; 32 MT for Hollow sections and 3 MT for fasteners)
Expansion Joints	02 Nos. Steel fabricated Expansion Joints as per Drawing
Bearings	LASTO®BLOCK elastomeric bearings; Total 06 Sets (B1, B2, B3, B4, B5 & B6) B1, B2, B3, B4 - Type C - 400x600x160mm3 B5, B6 - Type D or E - 150x250x30mm3
Semi Rigid Steel Crash Barriers	H2W2 type; Both side Thrie Beam Crash Barriers with post interval of 3.00 M
Surface Preparation and Painting	As per Technical Specification appended herewith (in line with IRS B1-2001 specifications) with minimum DFT of 150 Microns. Both the coats of Aluminium Paints (as per IS 2339) shall be applied at Vendor's shop prior to despatch.
GRSE supplied Materials	Bearings for the tendered Bridge (06 Sets). All other items are to be supplied by Vendor.

CLAUSE NO. 2.0: RAW MATERIALS AND BOUGHT OUT ITEMS

- (a). Steel raw material involved will be completely under Vendor's scope as per drawing.
- (b). Except for Bearings all items required in the completion of the ibid project in entirety shall be in Vendor's scope.
- (c). All material with sub-parts as per BOM are to be supplied by vendor.
- (d). Raw materials for above specification shall be as per SOTR, Drawings and Specifications.
 - (i) Specified Steel shall be sourced only from the Main / Primary producers of the steel and should be BIS certified i.e. from SAIL / TISCO / JSPL. Copies of P.O.

- placed on the Primary Steel Producer shall have to be furnished to GRSE prior to commencement of fabrication work.
- (ii) Steel shall not be sourced from the producers who in any way are connected with manufacturing of steel through recycling of the steel scrap.
 - (iii) Vendor should submit related purchase documents of raw steel and paints quality documents (if desired by GRSE) along with other relevant documents like MTC, GC etc. during inspection / delivery of Bridge components.

CLAUSE NO. 3.0: INSPECTION OF FABRICATED COMPONENTS

- (i) The Inspection of fabricated steel bridge components shall be carried out at Vendor's shop / yard by RITES / Bureau Veritas / DNV-GL along with GRSE's nominated Agency. Bidder to indicate the Inspection Agency in their offer.
- (ii) Vendor is required to furnish, within 07 days from placement of LOI / Work Order, whichever is earlier, a Quality Assurance Plan (QAP) and Welding Procedure Scheme / Specification (WPS) for the approval of GRSE. The ibid Plan and Scheme will be reviewed by GRSE and approval will be given not later than 07 days of receipt of the documents, provided there are no modifications / alterations / clarifications required in the submitted documents.
- (iii) The Inspection shall have to be carried out as per approved QAP and WPS. Required gauges for carrying out the inspection shall have to be arranged by the Vendor for dimensional accuracy checks and interchangeability checks.
- (iv) Advance intimation (at least 14 days prior) to be furnished to GRSE prior to commencement of Third Party Inspection.
- (v) Vendor is required to furnish the Inspection Clearance Note issued by TPI along with other relevant documents immediately after completion of Inspection.
- (vi) All facilities required for carrying out the inspection, including cost of TPI, shall be in the scope of vendor.

CLAUSE NO. 4.0: DEFECT LIABILITY PERIOD

The Defect Liability Period will cover the entire Warranty Guarantee period indicated in Article 8 of NIT document. i.e. 24 months from the date of completion of delivery at site.

CLAUSE NO. 5.0: TRANSPORTATION / FREIGHT UP TO SITE AND UNLOADING THEREOF

- (i) The transportation of fabricated components from Vendor's shop / yard to site shall be in vendor's scope.
- (ii) Unloading and stacking of components at site or at Customer's storeyard shall also be in the scope of Vendor.
- (iii) E-Way Bill required for transit up to site shall be generated / arranged by vendor / vendor's authorized transporter.
- (iv) Vendor has to share the particulars of the Transporter including but not limited to Vehicle Nos., Invoice, LR Copies, Copy of e-way Bill(s), Delivery Challans etc., immediately after despatch of bridge components from Vendor's shop / yard.

CLAUSE NO. 6.0: TRANSIT INSURANCE

- (i) Transit Insurance of the fabricated bridge items being transported from Vendor's shop / yard to site, shall have to be covered by Vendor, keeping GRSE co-insured.
- (ii) A copy of the Transit Insurance document shall have to be submitted to GRSE prior to commencement of despatch.

CLAUSE NO. 7.0: CONTRACTOR'S ALL RISK INSURANCE

- (i) It will be the prerogative of the Vendor to cover the entire risk associated with the project to men, material and machinery, through a Comprehensive Contractor's All Risk Insurance Policy (CAR) during the erection / launching of the bridge at site.
- (ii) The CAR policy should co-insure GRSE of the ibid risks and a copy of the CAR policy is also required to be furnished to GRSE prior to despatch of the bridge items at site.

ANNEXURE – I (A)

TECHNICAL SPECIFICATIONS FOR STEELWORKS FABRICATION (TSSF)

CLAUSE NO. 1.0: SCOPE

- (a). This document comprises of Technical Specification for Steelwork Fabrication. This document complements the Execution Drawings and 3D Fabrication Model produced by GRSE.
- (b). In some cases, Execution Drawings may specify more demanding Quality Requirements - in that case, information stated in Execution Drawings prevails.

CLAUSE NO. 2.0: DEFINITIONS

- (a). **GRSE** – Designer of Steelwork.
- (b). **GRSE** – Purchaser of the Steel Structure.
- (c). **GRSE Supervisor** – Element or elements from GRSE staff, entitled to accompany and supervise Manufacturer's activities throughout different production stages.
- (d). **Details** – Any structural detail (connections, stiffeners ...) represented in Execution Drawings that require fabrication works, such as drilling, welding, grinding or machining.
- (e). **Execution Drawings** – Detail Design drawings submitted by GRSE, complementing 3D Model.
- (f). **Final structure or structure "as finished"** – Steelwork in its delivery conditions, after conclusion of welding and application of anti-corrosion treatment.
- (g). **Fit-up** - Components assembly stage, before definitive welding.
- (h). **Full contact Connections** - Connections with special requirement, mentioned in execution drawings.
- (i). **HSFG Bolts** – High Strength Friction Grip bolts
- (j). **Inspecting Officer** - person, firm or department nominated by the Purchaser to inspect the stores on his/her behalf and the Deputies of the Inspecting Officer so nominated.
- (k). **IRS B1-2001** – Refers to most recent version of INDIAN RAILWAY STANDARD - Specification for Fabrication and Erection of Steel Girder Bridges and Locomotive Turn-Tables.

- (l). **ITP** – Inspection and Test Plan. Elaborated by the Manufacturer, in compliance with requirements of Manufacturer’s Quality Plan and GRSE Technical Specifications. Must be approved by GRSE.
- (m). **Manufacturer** – Refers to the Manufacturer to which GRSE has awarded the fabrication of Steelwork and, extensively, to any of its subcontractors or suppliers.
- (n). **MT** – Magnetic particles test.
- (o). **NDT** – Non-destructive testing.
- (p). **Preassembly marks** – Marks done to identify connections and pairs tested in the Preassembly.
- (q). **Preparation stage** – Prior to Fabrication, includes analysis of Execution Drawing and 3D Model and preparation of Shop Drawings (tasks under the Manufacturer Scope).
- (r). **RT** – Radiographic testing.
- (s). **Shop Drawings** – Drawings prepared by the Manufacturer with all information required for correct fabrication.
- (t). **Steelwork** – Refers to the object of Supply, to the Steel Structure or any isolated task performed by the Manufacture.
- (u). **Template** – Fixture.
- (v). **UT** – Ultrasonic testing.
- (w). **WPS** – Refers to Manufacturer’s Welding Procedure Specification, approved by a certified entity.
- (x). **3D Model** – 3D Model prepared by GRSE, using TEKLA Structures or equivalent software. 3D Model doesn’t include preparation for manufacturing. The Manufacturer must perform all preparation tasks in accordance with qualified procedures such as definition of chamfers, gaps, backing plates, splice joints, and any other preparation task required for proper fabrication.

CLAUSE NO. 3.0: NORMATIVE REFERENCE

For undated references, the latest edition of referred publication applies.

Without prejudicing the obligation of applying all regulatory requirements directly or indirectly referred to in this document, the Manufacturer must be familiarized with the contents and context of the codes and standards listed below.

(a). Corrosion protection:

- IS: 34 - Basic carbonate of lead for paints
- IS: 51 - Zinc chrome for paints
- IS: 57 - Red lead for paints and other purposes
- IS: 77 - Linseed oil, boiled for paints
- IS: 102 - Ready mixed paint, brushing, red lead, nonsetting, priming
- IS: 104 - Ready mixed paint, brushing, zinc chrome, priming
- IS: 123 - Ready mixed paint, brushing, finishing, semi-gloss, for general purposes to Indian Standard colours
- IS: 209 - Zinc ingot
- IS: 958 - Temporary corrosion preventive grease, soft film, cold application
- IS: 2074 - Ready mixed paint, air drying, red oxide-zinc chrome, priming
- IS: 2629 – Recommended practice for hot-dip galvanizing of iron and steel
- IS: 4759 - Hot-dip zinc coatings on structural steel and other allied products – specification
- IS: 5666 - Etch primer
- IS: 5905 - Sprayed aluminium and zinc coatings on iron and steel

- IS: 6586 - Recommended practice for metal spraying for protection of iron steel
- IS: 9954 - Pictorial surface preparation standards for painting of steel surfaces
- IRS M-41 - Corrosion resistance steel
- IRS P-31 - Zinc chromate read-oxide primer

(b). **Fabrication:**

- IS: 7215 - Tolerances for fabrication of steel structures
- IRS B1 - Specification for fabrication and erection of steel girder bridges and locomotive turn-tables

(c). **Mechanical fasteners:**

- IS: 1148 - Hot rolled steel rivet bars (up to 40mm dia) for structural purposes
- IS: 1149 - High tensile steel rivet bars for structural purpose
- IS: 1363 - Hexagon head bolts, screws and nuts of product grade C
- IS: 1364 - Hexagon head bolts, screws and nuts of product grade A and B.
- IS: 1367 - Technical supply conditions for threaded fasteners
- IS: 2016 - Plain washers
- IS: 2638 - Flat split cotters
- IS: 3063 – Fastners - single coil rectangular section spring washers
- IS: 3757 - Specifications for high strength structural bolts
- IS: 4000 - High strength bolts in steel structures – code of practice
- IS: 5369 - General requirements for plain washers and lock washers
- IS: 5372 - Taper washers for channels
- IS: 5374 - Taper washers for I beams
- IS: 6610 - Heavy washers for steel structures
- IS: 6623 - High strength structural nuts – specifications
- IS: 6639 - Hexagon bolts for steel structures
- BS-111 - RDSO guidelines for use of High Strength Friction Grip (HSFG) bolts on bridges on Indian Railways

(d). **Steel:**

- IS: 549 Split pins
- IS: 808 Dimensions for hot rolled steel beam, column, channel and angle sections
- IS: 1730 Steel plates, sheets, strips and flats for structural and general engineering purposes-dimensions
- IS: 1852 Rolling and cutting tolerances for hot rolled steel products
- IS: 2062 Hot Rolled Low, Medium & High Tensile Structural Steel
- IS: 3502 Steel Chequered plates
- IS: 7283 Hot rolled bars for production of bright bars and machined parts for engineering applications
- IRS M-42 High strength low alloy structural steel with enhanced corrosion resistance
- IRS M-43 High strength low alloy structural steel rivet bars with enhanced corrosion resistance

(e). **Testing:**

- IS: 822 - Code of procedure for inspection of welds

(f). **Welding:**

- IS: 814 - Covered electrodes for manual metal-arc welding of carbon and carbon manganese steel
- IS: 816 - Code of practice for use of metal-arc welding for general construction in mild steel
- IS: 817 - Code of practice for training and testing of metal arc welders
- IS: 818 - Code of practice for safety and health requirements in electric and gas welding and cutting operations
- IS: 822 - Code of procedure for inspection of welds
- IS: 7307 - Approval tests for welding procedures – fusion welding of steel
- IS: 7310 - Approval tests for welders working to approved welding procedures – fusion welding of steel
- IS: 9595-Metal-arc welding of carbon and carbon manganese steels recommendations
- IRS M-28 - Classification, testing and approval of metal-arc welding electrodes for use on Indian Railways
- IRS M-39 - Classification, testing and approval of submerged arc welding wire flux combination
- IRS Welded bridge code (WBC)

(g). **Miscellaneous:**

- IRS Steel bridge code (SBC)

CLAUSE NO. 4.0: SPECIFICATIONS AND DOCUMENTATION

The Manufacturer must understand that GRSE Steelwork demanding structure has highly demanding geometric requirements. Unless otherwise specified, the execution of all steel structures must comply with the IRS B1-2001 requirements.

Fabrication feature for Modular Bridges	References
Welds (including preparation, execution, and inspection)	IRS Welded bridge code IRS B1 Specification for fabrication and erection of steel girder bridges and locomotive turn-tables
Geometric control (Decks, Pavements Beams, Truss, Bearings and bracings)	IRS B1-2001 Specification for fabrication and erection of steel girder bridges and locomotive turn-tables
Corrosion protection	IRS B1-2001 Specification for fabrication and erection of steel girder bridges and locomotive turn-tables IS 4759

All steel structures must fulfil the technical specifications expressed in IRS B1-2001. The inspections and tests must meet the terms of IRS B1-2001. For some components, Quality requirements are more demanding than those defined in IRS B1-2001. For these cases, additional requirements are defined in these Technical Specifications, Execution Drawings, or other complementary documents.

4.1. Quality Management and Quality Plan

The Manufacturer must have a Quality Management System meeting the requirements of ISO 9000 series. The Quality Management System must be fully implemented in all stages of production.

The Manufacturer must draw and submit to GRSE a Quality Plan for Execution of Steelwork, meeting the guidelines described in ISO 10005 and fully adapted to Steelwork specific requirements and Quality demands.

The Manufacturer must assess the work of GRSE Supervisor, which includes cooperation in the following tasks:

- Produce an ITP to be approved by GRSE;
- Send GRSE all inspection records, tests and remedial actions;
- Granting the access of GRSE Officers/representatives to the manufacturing facilities;
- Keeping GRSE informed about the work progress, asking for GRSE Officers/representatives presence whenever it's necessary, always with a minimum 48 hours' notice;
- Implement all inspections, tests and remedial actions requested by GRSE.

The Manufacturer must prepare, organize and submit to GRSE all relevant records of fabrication as per the formats given in Appendix I of IRS B1-2001.

CLAUSE NO. 5.0: COMMUNICATION, COORDINATION AND MANAGEMENT

All correspondence, reports and procedures shall be issued either in English language.

The Manufacturer must clearly designate a Project Manager.

The Manufacturer Project Manager must be directly engaged in all stages of fabrication process, ensuring full coordination between stages.

CLAUSE NO. 6.0: CONSTITUENT PRODUCTS

Generally constituent products to be used for the execution of steel structures shall be selected from the relevant Indian standards listed or referred in IRS B1-2001.

In cases in which present Technical Specifications are more demanding than IRS B1-2001, present Technical Specification prevails.

In cases in which information is omitted from present Technical Specifications, IRS B1-2001 requirements prevail.

6.1. Identification, Inspection Documents and Traceability

The properties of supplied constituent products shall be documented in a way that enables them to be compared to the specified properties. Their conformity with the relevant product standard shall be checked in accordance with IRS B1-2001 and present Technical Specifications Requirements.

The mill test certificate must clearly indicate the specification to which the steel conforms and whether steel is killed and normalized. All the cast mark numbers/heat mark numbers shall be recorded along-with the number of plates in a register as soon as the plates are received in the workshop.

Full traceability must be implemented and accomplished.

6.2. Reception

The Manufacturer is responsible for the products acquisition in harmony with the dimensions and the commercial brands in the market. All material shall be accompanied with the Source Certificate and relevant Quality Control Documents. All materials must comply with this Technical Specifications and all the applicable codes and standards. All material must be acquired from reliable sources, with proven quality.

Whenever the steel is received without any test certificate, a sample test piece from plate of each cast mark number is to be cut and sent for testing. Only when it is established that the plates are of required specification, these shall be processed for cutting.

The storage of all materials shall be done according to the supplier and/or fabricator's specifications. All materials shall be stored in adequate conditions, with proper temperature and humidity control, avoiding contact with water and with soil and any other contaminating sources.

6.3. Steels

General product standards, thickness tolerances and surface conditions are defined in IRS B1-2001. The Steel Grade and Steel Quality to apply in the project are defined in the detail design drawings. By default, the Steel to be applied in this project is:

- **All Bridge steel elements: Grade E350 Quality C**
- **All Nose steel elements: Grade E350 Quality B0**

6.4. Welding Consumables

The type of welding consumable shall be appropriate to the welding process, the material to be welded and the welding procedure. Any special recommendations given by the Manufacturer/supplier shall be observed.

The welding consumables must follow the indications presented in chapter 3 of ISR Welded Bridge Code.

6.5. Mechanical Fasteners

6.5.1 General Requirements

In special cases not explained in present Technical Specifications, IRS B1-2001 also prevails whenever applicable.

Bolt and Nut from the same Assembly must be supplied with similar surface conditions, regarding corrosion protection.

Manufacture, workmanship, marking, packing, etc. for Bolts and Nuts shall comply with the requirements of IS:1367.

6.5.2 High strength friction grip (HSFG) bolts

High strength friction grip (HSFG) bolts shall conform to the requirements in chapter 28.9 of IRS B1-2001.

IRS B1-2001 applies to non-galvanized bolts of diameter from M12 to M36. For HSFG connections, only high strength structural bolts of classes 8.8 and 10.9 can be used.

6.5.3 Washers

The washers under the nut shall have a hole of 1.5mm larger in diameter than the shank of the bolt and shall have a thickness of not less than 6mm so that the nut, when screwed up, shall not bear on the shoulder of the bolt.

When high strength friction grip (HSFG) bolts are used, the washers shall conform IS 6649.

6.6. Pins

The alloy steel, 34CrNiMo6 +QT, used for pins should comply with standard EN 10083-3, technical delivery conditions for alloy steels with quenched and tempered condition.

See table below for reference:

Steel designation		Mechanical properties for the ruling section (see EN 10083-1:2006, Annex A) with a diameter (d) or for flat products thickness (t) of				
Name	Number	R _e min.	R _m	A min.	Z min.	KV ^b min.
34CrNiMo6	1.6582	MPa ^c		%	%	J
$d \leq 16$ mm $t \leq 8$ mm		1000	1200 to 1400	9	40	-
$16 \text{ mm} < d \leq 40$ mm $8 \text{ mm} < t \leq 20$ mm		900	1100 to 1300	10	45	45
Steel designation		Mechanical properties for the ruling section (see EN 10083-1:2006, Annex A) with a diameter (d) or for flat products thickness (t) of				
$40 \text{ mm} < d \leq 100$ mm $20 \text{ mm} < t \leq 60$ mm		800	1000 to 1200	11	50	45

100 mm < d ≤ 160 mm 60 mm < t ≤ 100 mm	700	900 to 1100	12	55	45
160 mm < d ≤ 250 mm 100 mm < t ≤ 160 mm	600	800 to 950	13	55	45

The raw material, 34CrNiMo6 can be purchased in +QT tempered condition or in a different condition, however the pins at the end of the process must have the mechanical properties at room temperature in the quenched and tempered condition (+QT).

To ensure it, tensile tests are required before delivery final products. Charpy tests and Quimical Composition tests can be required, in case of tensile test is not enough to characterize the material.

6.7. Other Materials

All non-specified materials should comply with its specific regulations, in particular the Indian Standards, the Approval Certificates and Good Manufacturing Practice.

The characteristics of materials not specified by this Technical Specifications shall be proposed to GRSE by the Manufacturer. GRSE will decide on the need to perform additional tests to check the suitability of the materials suggested by the Manufacturer.

CLAUSE NO. 7.0: PREPARATION

7.1. Joint Preparation

The preparation of fusion faces, angle of preparation root radius and root face shall be as specified in IS 9595 and IS 4353.

If the gap between the root faces of a butt joint is excessive, the fusion faces shall be built-up with weld metal to give the appropriate gap before the weld proper is commenced.

For manual welding, the tolerances on limits of gap and root face should be ±1mm on the specified dimensions for material upto and including 12mm thick and ±2mm for material over 12mm thick. The tolerance on the included angle of a V preparation is recommended to be ±5 degree and for U and J

preparations -0/+10 degree. For an automatic process, closer limits are necessary and particular requirements depend on the characteristics of the process.

Fusion faces and the surrounding surfaces shall be free from heavy scale, moisture, oil, paint or any other substance which might affect the quality of the weld or impede the progress of welding.

The use of protective coatings that are specially formulated with the intention that they should not interfere with the welding is not excluded by the requirements above but shall be demonstrated by means of specimen welds that the coating complies with them.

7.2. Shop Drawings

After reception of GRSE Execution Drawings, the Manufacturer shall perform a review of the drawings, **and produce Shop Drawings** with clear definition of joint preparation and with enough detail for the correct fabrication of the steel structure. Shop drawings may include additional drawings, sketches, and explanatory notes. All drawings shall be checked and evaluated, verifying that:

- Production methods intrinsically required by Execution Drawings or 3D Model are feasible, may be performed and inspected.
- Qualified production procedures intrinsically required by Execution Drawings or 3D Model are applicable.
- Production process is adequate for each geometric component requirements.

7.3. Changes to Execution Drawing

The Manufacturer may propose substitution of the raw material stated in the Execution Drawings, 3D Model or Provision Lists.

Any change to Execution Drawings, 3D Model or complementary documents produced during fabrication must be previously authorized by GRSE/Client, and will be included in the “as built” version of the shop drawings.

Prior to being issued for execution, all shop drawings shall be sent to GRSE for approval. The Shop Drawings shall include the following information:

- Cutting and drilling plans with definition of sections and plates, grades and/or quality characteristics of all elements
- Plans with “as built” geometrical definition of all structural elements, including tolerances
- Possible temporary connections
- Representation of welds with references to WPS, including definition of chamfers and joint preparation details
- Preheating procedures
- Machining procedures
- Highlight for special attention, interface details, calling for special tolerances, trial assembly, holds, etc
- Splice joints required by Manufacturer and formally approved by GRSE
- Fit-up sequences – especially in cases in which fit-up is performed in more than one stage (with interruptions to perform welds that became inaccessible after fit-up conclusion)

If special sequences must be followed for fabrication operations or control activities, these shall be indicated clearly.

CLAUSE NO. 8.0: FABRICATION

8.1. General

General requirements for Steelwork fabrication are given in IRS B1-2001.

8.2. Identification

At all stages of fabrication each piece or package of similar pieces of steel components shall be identifiable by a suitable system. Unless otherwise noticed, finished components shall be identified to corresponding material certificates.

8.3. Handling and storage

Constituent products shall be handled and stored in conditions that are in accordance with suppliers' recommendations.

A constituent product shall not be used if it is beyond its shelf life if this is specified by its supplier. If products have been handled, or stored in a way, or for a length of time that may have led to significant deterioration, they shall be checked before use to ensure that they still comply with the relevant product standard.

Structural steel components shall be packed, handled, and transported in a safe manner, so that permanent deformation does not occur, and surface damage is minimized.

8.4. Cutting

Cutting shall be carried out in such a way that the requirements to geometrical tolerances, maximum hardness and smoothness of free edges as specified in IRS B1-2001 are met.

Burrs that could cause injury or prevent the proper alignment or bedding of sections or sheeting shall be removed.

8.5. Holing

8.5.1. Dimensions and execution of Holes

The holes shall be made by drilling only.

For black bolts a clearance (difference in diameter) of 1.5mm for all sizes of bolts shall be allowed.

For High Strength Friction Grip (HSFG) bolts, the nominal diameter of hole shall be 1.5mm more than the bolt diameter for less than 25mm bolt and 2mm more than the bolt diameter for larger bolt diameters.

For pins, the diameter of the pin shall not be less than that of the hole by more than 0.5mm.

8.6. Fit-up

8.6.1 General

Fit-up must ensure an adequate geometry prior to welding.

Geometric control must be carried out in fit-up stage prior to welding, applying similar or more restrictive tolerances than the ones applicable to the structure "as finished".

In fit-up, temporary bracings and other auxiliary means may be used to ensure that the structure will not be submitted to significant deformations and distortions during welding. Temporary components must be removed after welding conclusion. Temporary connections must not prejudice integrity of the structure "as finished", neither structural nor aesthetical – if necessary, remedial actions must be carried out to ensure the quality of final structure.

Parts to be weld shall be assembled such that the joints are accessible and visible to the welders and/or operators involved. Jigs and manipulators shall be used, where practicable, so that the welding can be carried out in the most suitable welding position. All welds that became inaccessible after fit-up must be carried out in advance and submitted to required inspection, including NDT's. All welds carried out in advance must be performed by qualified welders in compliance with qualified procedures.

The sequence of assembly and welding shall be such that all welds can be examined in accordance with the relevant requirements.

The Manufacturer must adopt adequate measures to avoid significant deformations of the structure during welding. To minimize distortion and/or residual stresses it may be necessary to pre-set joints or pre-bend parts of the structure prior to welding and/or to specify the weld sequence to assist in the control of distortion and shrinkage.

Geometric control performed in fit-up stage doesn't replace the need to perform geometric control after welding.

8.6.2 Templates

The use of templates to ensure dimensional uniformity is mandatory when the work is made completely interchangeable. When the work isn't interchangeable, all elements shall be erected and marked in place.

Dimensional templates must be submitted to a demanding geometric control.

Dimensional templates must be low deformable to ensure the preservation of geometry during fabrication and handling.

Structure elements that will be "in situ" connected with anchor bolts (such as pier frames) must be obligatorily controlled by dimensional templates. The Manufacturer must produce a dimensional template that will be used later to position the anchor bolts in situ.

8.7 Assembly Check

All components shall be assembled so that they are not damaged or deformed beyond the tolerances specified.

In final assembly position, drifting to align holes shall be done in such a way as to avoid distorting or enlarging holes. Holes which cannot be aligned without excessive deformation shall be rejected unless enlargement by reaming is specifically approved according to the tolerances specified in IRS B1-2001 and Tolerances' chapter of present Technical Specifications or equivalent project documentation.

After completion of fabrication the fit between components that are inter-connected at multiple connection interfaces shall be checked using dimensional templates, accurate three-dimensional measurements or by trial assembly. Requirements regarding applicability and extension of trial assembly are specified in present Technical Specifications Tolerances' chapter and/or in complementary documents.

CLAUSE NO. 9.0: WELDING

9.1. General

Welding shall be undertaken in accordance with the requirements of the relevant part of IRS B1-2001 and IRS WBC standards.

9.2. Welding Procedures and Welding Personnel

9.2.1 Welding procedures

The welding shall be carried out with qualified welding procedure specifications in accordance with clauses 19 and 21 of IRS WBC standard.

The welding procedure shall be such as to avoid distortion and minimise residual shrinkage stresses.

The welding techniques and sequence, quality, size of electrodes, voltage and current required shall be as prescribed by manufacturers of the material and welding equipment.

The Manufacture should submit full details of welding procedures.

In case of not full compliance with requirements stated above, the Manufacturer must inform GRSE, clearly defining the extent of the noncompliance, and additional measures must be adopted to guarantee the adequacy of the welding procedures.

9.2.2 Welders and welding operators

Welders shall be qualified in accordance with clause 20 of IRS WBC.

Records of all welder and welding operator qualification tests shall be kept available.

In case of not full compliance with requirements stated above, the Manufacturer must inform GRSE, clearly defining the extent of the noncompliance, and additional measures must be adopted to guarantee the adequacy of the welding procedures.

9.2.3 Welding coordinator

The Manufacture shall employ a competent welding supervisor to ensure that quality of materials and the standard of workmanship comply with the requirements laid down in the IRS WBC.

9.3. Preparation and Execution of Welding

9.3.1 General

General requirements regarding type of welds, joint preparation, assembly for welding and tack welds are given in IRS WBC and relevant standards there referred.

Care shall be taken to avoid stray arcing, and if stray arcing does occur the surface of the steel shall be lightly ground and checked. Depending upon the application an inspection should occur.

Visible imperfections such as cracks, cavities and other unacceptable imperfections shall be removed from each run before deposition of further runs. All slag shall be removed from the surface of each run before each subsequent run is added and from the surface of the finished weld. Particular attention shall be paid to the junctions between the weld and the parent metal.

9.3.2 Fillet welds

General requirements are given in IRS WBC standards.

Unless otherwise specified, the fusion faces to be joined by fillet welds shall be in as close contact as possible.

A fillet weld, as deposited, shall not be less than the specified dimensions for throat thickness and/or leg length as appropriate, considering the use of deep penetration processes or partial penetration as appropriate.

In making a typical I-section four fillet welds are to be made. The welding sequence to be followed is indicated by number 1 to 4 as shown in the figure below.

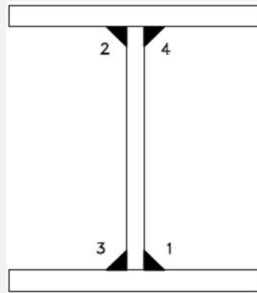


Fig. 1 – Sequence of fillet welding for fabricating the I-section

9.3.3 Butt welds

General requirements are given in IRS WBC standards.

The ends of butt joints shall be welded to provide the full weld thickness. This may be achieved using run-off and/or run-on plates.

Run-on and run-off plates, when required, shall have a thickness and edge preparation similar to those used for the joint. The length of the run-on and run-off plates shall not be less than 40mm. After completion of the welds, any run-on/run-off plates shall be removed according with IRS WBC standard.

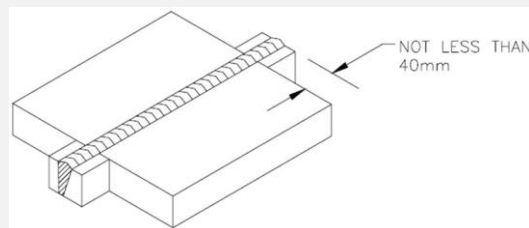


Fig. 2 – Run-on and run-off plates

Whenever a square butt weld in a 10 or 12mm thick plate is required to be made, the sequence to be adopted is shown in figure below.

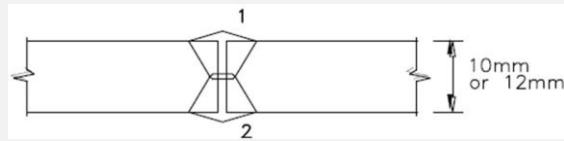


Fig. 3 – Sequence of square butt welding

9.3.4 Branch welds

Branch connection in hollow section lattice structures, which use combined welded joints (fillet weld and single-sided butt weld), may be welded without backing.

Annex D of IS 9595 gives the typical details for branch connections for structural hollow sections.

9.4 Lamellar Tearing

The Manufacturer must be technically prepared to implement adequate welding and inspection procedures in details susceptible to lamellar tearing. Such procedures may include:

- Adequate welding sequence, using a buttering layer sequence;
- Controlled preheating;
- Balanced layer sequence in symmetric welds;
- Buttering with a low-strength material.

General guidance is given in Annex H of IS 9595.

9.5 Acceptance Criteria

Welded components must comply with general requirements defined in present Technical Specifications and clause 31 of IRS WBC.

CLAUSE NO. 10.0: MACHINED PARTS

Mechanical tolerances required for machined parts always refer to the structure “as finished”, after conclusion of welding and application of anti-corrosion protection.

The Manufacturer must be particularly careful manufacturing parts that combine welding and milling works with demanding mechanical tolerances. If possible, the Manufacturer must conclude all welding prior to milling, to ensure that distortion and misalignment caused by welding don’t affect required tolerances and functional requirements of machined components.

In cases in which, welding must be necessarily performed after milling, the Manufacturer must apply adequate procedures and perform detailed inspection after welding to ensure that final quality is not affected.

For components with fitted or tight adjustment (such as fitted pins or threaded parts) the Manufacturer must define an adequate fabrication clearance, considering the thickness corrosion protection layer.

CLAUSE NO. 11.0: MECHANICAL FASTENING

11.1. General

Plate washers shall not be thinner than 6 mm.

The final tightening shall not proceed until the gap between the plates has been closed. Residual gap, if any, shall be less than 2 mm at edges. There shall, however, be no gap in the central portion. In case the central portion is not in close contact or gap at edges is more than 2 mm, straightening of members may be done.

11.2. Bolt Assemblies

Bolt assemblies consist of matching bolts, nuts, and washers (as necessary) as specified in present Technical Specifications and IRS B1-2001.

Washers are necessary in all cases, including for use with non-preloaded bolts in normal round holes.

11.3. Tightening of Non-preloaded Bolts

Residual gaps up to 2 mm in snug-tight condition may be left between contact faces unless if full contact bearing is specified.

NOTE: The term "snug-tight" can generally be identified as that achievable by the effort of one man using a normal sized spanner without an extension arm, without overloading the bolts and can be set as the point at which a percussion wrench starts hammering.

11.4. Preparation of Contact Surfaces in High Strength Friction Grip bolts

The steel interface between the plies which form a joint having High Strength Friction Grip (HSFG) bolts shall have special surface preparation so that sufficient slip factor is available. The surface preparation shall be as assumed in design, based on slip factor specified in Table XIII of Steel Bridge Code.

For new construction, the interface between the plies which are connected together by the HSFG bolts shall be "Aluminium metallised without any over coating". The aluminium metallising shall be as per clause 39.2.1 from IRS B1-2001. It shall be ensured a friction of 0.40.

11.5. Tightening of High Strength Friction Grip bolts

The tightening of High Strength Friction Grip bolts should be according to the clauses 28.10.5 to 28.10.7 from IRS B1-2001.

CLAUSE NO. 12.0: MARKING

12.1. General

Independent parts of the steel structure must be clearly and indelible identified. All constituent products shall be traceable at all stages of fabrication and after the hand-over of the final product. Unmarked constituent products shall be treated as nonconforming products. If different grades of constituent products are in circulation together, each item shall be designated with a mark that identifies its grade.

12.2. Identification Marks

All marks shall be durable and distinguishable and shall be applied in a way that doesn't produce any damage on the steel structure. All marks must be clearly visible after application of corrosion protection.

Marks must be placed in positions where they will be **visible in storage and after erection.**

12.3. Erection Marking

Every portion of the work shall be distinctly stenciled with paint with letter size not less than 10 mm for guidance in the erection in the field and stamped with the letters specified in the drawings. In the case of non-interchangeable work, the system of marking shall be in accordance with the drawings prepared by the tenderer and approved by the Purchaser.

If the work is considered interchangeable by the Inspecting Officer a simplified scheme of marking will be permitted, i.e. all pieces which are identical shall bear one distinguishing mark irrespective of the span to which they belong. Should the interchangeability not to the satisfaction of the Inspecting Officer, the whole of the spans must be erected complete and all parts marked to their place without additional charge. The tenderers must state in their tenders whether they intend to adopt complete interchangeability or not.

CLAUSE NO. 13.0: SURFACE TREATMENT

13.1. General

No part of the work shall be painted or coated, packed or despatched, until it has been finally inspected and approved by the Inspecting Officer. Dry Film Thickness shall be measured by elcometer or any other approved method.

When so specified by the Purchaser, the whole of the work except machined surfaces shall be given protective coating using the system of painting or metallising given in clause 39.2.1 from IRS B1-2001.

For all locations and for all types of New Steel Girder Bridges the protective coating shall be metalizing with sprayed aluminum followed by painting as per painting schedule given below:

- i. One coat of etch primer conforming to IS:5666
- ii. One coat of zinc chrome primer to IS:104 with the additional proviso that zinc chrome to be used in the manufacture of primer shall conform to type 2 of IS:51
- iii. Two coats of aluminium paint to IS:2339 brushing or spraying as required. One coat shall be applied before the fabricated steel work leaves the shop. After the steel work is erected at site, the second finishing coat shall be applied after touching up the primer and the finishing coat if damaged in transit.

13.2. Surface Preparation

13.2.1 Surface preparation for Metal spraying

The surface shall be thoroughly cleaned and roughened by compressed air blasting or centrifugal blasting with a suitable abrasive material in accordance with Clause 3 of IS:6586. Immediately, before spraying it shall be free from grease, scale, rust, moisture or other foreign matter. It shall be comparable in roughness with a reference surface produced in accordance with appendix A of IS:5905 and shall provide an adequate key for the subsequently sprayed metal coating.

13.2.2 Surface preparation for Hot-dip galvanizing

The preparation and the galvanizing process must follow the technical specifications, contract, drawings, and the standards IS 2629 and IS 4759.

The cleaning operations must be taken before the galvanizing process to ensure the correct procedure by manufacturer in accordance with IS 2629 and IS 4759.

The steel surface must be free of sharp edges and corners, weld residues and colour stains or wording on parts to ensure a final coating of good appearance.

13.3 Metal Spraying

The metal spraying shall be carried out as soon as possible after surface preparation but in any case within such period that the surface is still completely clean, dry and without visible oxidation. If deterioration in the surface to be coated is observed by comparison with a freshly prepared metal surface of similar quality which has undergone the same preparation, the preparation treatment should be repeated on the surface to be coated.

The wire method shall be used for the purpose of metallising the diameter of the wire being 3mm or 5mm. Specified thickness of coating shall be applied in multiple layers and in no case less than 2 passes of the metal spraying unit shall be made over every part of the surface. At least one layer of the coating must be applied within 4 hours of blasting and the surface must be completely coated to the specified thickness within 8 hours of blasting.

The surface of the sprayed coating shall be of uniform texture and free from lumps, coarse areas and loosely adherent particles.

The nominal thickness of the coating shall be 150µm. The minimum local thickness, determined in accordance with procedure given in clause 7.1 of Appendix VII from IRS B1-2001, shall be not less than 110µm.

13.4 Painting

Surfaces which are inaccessible for cleaning and painting after fabrication shall be applied one heavy coat of zinc chrome red oxide priming to IS:2074 before being assembled for rivetting/welding.

Any oil, grease or other contamination should be removed by thorough washing with a suitable thinner until no visible traces exist and the surfaces should be

allowed to dry thoroughly before application of paint. The coatings may be applied by brush or spray. If sprayed, pressure type spray guns must be used. One coat of wash primer to IS:5666 shall be applied first. After 4 to 6 hours of the application of the wash primer, one coat of Zinc chrome primer to IS:104 with the additional proviso that zinc chrome to be used in the manufacture of primer shall conform to type 2 of IS:51 shall be applied. After hard drying of zinc chrome primer, one coat of Aluminium paint to IS:2339 (brushing or spraying as required) shall be applied.

After the steel work is erected at site a second cover coat of Aluminium paint to IS:2339 (brushing or spraying as required) shall be applied after touching up the primer and the cover coat given in the shop if damaged in transit.

13.5 Hot-dip Galvanizing

Unless specified otherwise, the process for galvanization is hot dip galvanizing. In that case:

- The hot dip galvanizing coat and preparation shall comply with IS 2629 and IS 4759
 - The thickness of the coat shall be according to IS 4759
 - The cleaning operations must be taken before the galvanizing process to ensure the correct procedure by manufacturer in accordance with IS 2629 and IS 4759. The steel surface must be free of sharp edges and corners, weld residues and colour stains or wording on parts to ensure a final coating of good appearance
 - The oozing fluid and the minor defects resulting from galvanizing must be cleaned and repaired
 - The galvanizer shall provide a certificate of compliance with the requirements
- The Manufacturer must ensure that the Steelwork is prepared for galvanizing, including adequacy of thickness, openings (ex.: drilling holes), dimensional compatibility and other preparatory works required to prevent structural damaging, residual stresses, or excessive deformations.

All preparatory works that imply interventions in steelwork must be previously approved by GRSE.

13.6 HSFG bolts

For new construction, the interface between the plies which are connected together by the HSFG bolts shall be "Aluminium metallised without any over coating". The aluminium metallising shall be as per clause 39.2.1 from IRS B1-2001.

For galvanized structures the slip factor shall be tested by the Manufacturer according Annex B of IS 4000.

13.7 Machined components

All machined surfaces are to be well coated with a mixture of white lead to IS:34 and Mutton tallow to IS:887.

CLAUSE NO. 14.0: GEOMETRICAL TOLERANCES

Unless specified otherwise, the geometrical deviations must comply with Appendix II of IRS B1-2001.

CLAUSE NO. 15.0: INSPECTION, TESTING AND CORRECTION

15.1. General

The Inspecting Officer shall be empowered, at his/her discretion to make or have made under the supervision, any of the tests specified in the specifications mentioned herein in addition to such other tests as he/she may consider necessary, at any time upto the completion of the contract and to such an extent as he/she may think necessary to determine the quality of all materials used therein. In doing so, he/she shall be at liberty under any reasonable procedure, he/she may think fit to select, identify, have cut-off and take possession of test pieces from the material either before, during or after its being worked up into the finished product.

He/she shall also be empowered to call for a duly authenticated series of mechanical tests to be obtained from the maker for these materials used in the work and to accept the same in lieu of other tests to the extent he/she deems fit. The Manufacturer shall supply the material required for the test pieces and shall also prepare the test pieces necessary.

The test shall be carried out by the Manufacturer, for which Manufacturer shall provide all facilities including supply of labour and plant. Inspecting Officer may at his/her discretion direct the Manufacturer to despatch such tests pieces as he/she may require to the National Test House or elsewhere as he/she may think fit for such testing purposes.

15.2. Constituent Products and Components

Whenever the steel is received without any test certificate, a sample test piece from plate of each cast mark number is to be cut and sent for testing. Only when it is established that the plates are of required specification, these shall be processed for cutting.

15.3. NDT

15.3.1 General

General guidance is given in relevant parts of IRS WBC.

Independently of the NDT performed by the Manufacturer designated as a Second Party inspection, buyer can hire inspection of an external entity designated as a Third Party. Access to inspections performed by third party companies must be allowed, since previously communicated in advance.

If a weld will become inaccessible through subsequent work, it shall be inspected prior to subsequent work being carried out. The Manufacturer must keep a photographic registry of invisible welds that will later be included in the Quality Process.

Marking of defective welds shall be permanent enough to be evident until the repair is carried out and the inspection completed.

15.3.2 Quality levels

Welds shall meet acceptance levels as per Appendix C from IRS WBC.

The weldment shall be inspected for dimensional accuracy (including warpage) and shall be within the tolerance specified.

15.3.3 Visual inspection of weld

For visual inspection defects, the weld surface shall be thoroughly cleaned of oxide layers and adherent slag. Brushing with a stiff wire-brush or grit blasting shall normally be followed instead of chipping hammer.

The finished welds shall be visually inspected and shall conform to the size and contour specified in the drawings. Conformity of fillet welds as to size and contour shall be determined by the use of gauges. Concavity and excessive convexity of fillet welds shall be marked for correction.

15.3.4 Additional NDT methods

Butt welds shall be examined by radiographic test which will present satisfactory evidence to the inspector that welds are meeting the quality requirements.

Other welds may be examined by radiographic or any other non-destructive method which are equally effective.

Welds shall also be examined by liquid penetrant flaw detection method or by magnetic particle flaw detection method as per IS 3658 and IS 3703.

15.3.5 Correction of welds

After the repair has been done, it shall be inspected again and properly marked to indicate whether the repair is satisfactory or not.

15.4 **Straightening Procedures**

If necessary, all steel materials shall be cold straightened or flattened by pressure before being worked or assembled unless they are required to be of curvilinear form. Pressure applied for straightening or flattening shall be such as it would not injure the material and adjacent surfaces or edges shall be in close contact or at uniform distance throughout.

Flattening and straightening under hot condition shall not be carried out unless authorized and approved by the Inspecting Officer.

15.5 **Structural, destructive, or other complementary tests**

Structural, destructive, or other complementary tests may be required by GRSE or proposed by the Manufacturer in presence of irregularities that may lead to components' rejection. Examples of irregularities that may imply complementary testing are given next:

- Noncompliance with Technical Specifications requirements;
- Visible inconsistency of welders' performance in similar welds – variation from welder to welder;
- Subcontractors not approved by GRSE;

- Significant subcontracting of Steelwork;
- Subcontractors not ensuring same quality as Manufacturer;
- Significant subcontracting of external welders;
- Inefficient or non-applicability of specified NDT control;
- Inconsistent geometric control;
- Doubts regarding reliability of raw materials suppliers;
- Doubts regarding applicability of welder's certificates or welding procedures;
- Doubts regarding execution of invisible welds – inexistence of photographic registry;
- Inadequate interpretation of Execution Drawings;
- Incoherent preparation of joints;
- Materials without mill test certificates;
- Inadequate or inefficient traceability – doubts regarding origin of material at any stage;
- Doubts regarding actual friction coefficient of surfaces in cases in which friction coefficient is specified or requested (including bolts);
- Failure of bolts during site assembly;
- Not satisfying responses to nonconformities;
- Lack of procedures or uncontrolled heat straightening of components;
- Application of mechanical straightening (with or without restraining forces) without formal approval from GRSE;

15.6 Erection / Trial Assembly in Manufacturer's Works

The work shall be temporarily erected/trial assembled complete at the Manufacturer's Works for inspection by the Inspecting Officer, except for such rivetting as must be done at site, so that accuracy of fit and perfection of workmanship may be assured. The work shall be put together with enough parallel drifts or turned bolts or both to bring the pieces into place. When so erected all holes left to be filled at site shall be so fair that a parallel gauge turned to a diameter 0.8mm less than that of the hole, of a length equal to the depth of the hole, can be passed through them without difficulty.

No drift shall be used anywhere in the work larger in any part than the hole in which it is to be driven. Holes for turned bolts, which have been 1 mm underdrilled in shop, should be reamed at site by the erecting agency.



Fig. 4 - Validation geometric control Modular Bridges

15.6.1 Interchangeability

Every span is to be temporarily erected complete in Contractor's works and all parts as marked to their place, unless the whole of the work is made completely interchangeable using steel jigs and hard steel bushes controlled by master gauges, in which case the first span must be completely erected to test the accuracy of the templates. Further spans or part span assemblies built from parts selected at random by the Inspecting Officer shall be erected from time to time to check the accuracy of the work as the Inspecting Officer may require.

Under special arrangement with the Purchaser, it shall be permissible for approved portions of the work to be despatched before complete erection of the first span, provided the Contractor satisfies the Inspecting Officer that such portions of the work are strictly interchangeable and will assemble correctly and accurately in the complete structure.

15.7 Response to nonconformities

In the event of significant irregularities, the Purchaser may emit formal nonconformity reports. In this scenario:

- Purchaser will inform the Manufacturer about Minimum Corrective Actions to be implemented;
- Purchaser will inform the Manufacturer about Specific Quality Demands;
- The Manufacturer must implement Minimum Corrective Actions defined by GRSE;
- The Manufacturer must identify Complementary Corrective Actions to ensure the achievement of Specific Quality Demands;
- The Manufacturer must formally respond to the Purchaser (via nonconformity report), closing and reviewing all actions implemented and assessing their effectiveness, appropriateness, and relevance.

CLAUSE NO. 16.0: STORAGE, PACKING AND LOADING

16.1. Handling and Storage

On receipt of rolled steel at workshop or fabrication yard they shall be carefully unloaded and stacked properly to avoid bending, twisting, corrosion, direct contact with the ground, etc.

All components shall be handled using adequate equipment and accessories, considering weight, geometry, fragility and dimensions of the component handled.

16.2. Packing and Loading

All projecting plates or bars shall be kept in shape by timber or angle bars spiked or bolted to them, and the ends of the chord lengths, end posts and plate girders at their shipping joints shall be protected and stiffened to prevent damage or distortion in transit as the Inspecting Officer may direct.

All threaded ends and machined surfaces are to be efficiently protected against damage in transit. The parts shall be sent out in lengths convenient for transport.

All straight bars and plates except small pieces are to be sent out in convenient bundles temporarily rivetted or bolted together or bound with wrought iron or suitable wire as the Inspecting Officer may direct. All rivets, bolts, nuts, washers, plates under 300mm square and small articles generally are to be packed separately for each span in cases each weighing, when full, not more than 350 kg, or in strong petroleum casks, or in barrels approved by the Inspecting Officer. If not entirely filled by the contents the space left shall be closely packed with wood shaving or other suitable material. Bolts and rivets of different sizes shall be separately packed in bags, each bag having a label indicating its contents. A list of the contents shall be placed in the top of each case or cask.

In the case of imported material all cases shall be made of 32mm boards with ends nailed with 90mm wire nails strengthened by battens and 38mm x 1.6mm (No. 16 BG) hoop-iron and made thoroughly secure for transit to India. All casks shall be in sound condition, and if not entirely filled by the contents the space left shall be closely packed with wood-wool or other suitable material. The heads shall be firmly secured by means of hoops in the usual way, and in addition each head shall be further secured by a strong wooden batten and not less than two strips of 1.6mm (No.16BG) hoop-iron passing over the head and nailed to the staves on both sides. The hoop-iron shall be long enough to pass over two hoops on each side of the cask and be nailed in such a manner that the hoops cannot slack back. Bolts and rivets of different sizes shall be packed in a separate canvas bags, each bag having a label indicating its contents. End field holes to be bolted in case of members having split in plate and channels.

Each package, case or bundle is to have clearly stencilled on it in good oil paint the address as stated in the order of contract, gross and net weight description of contents and such marks as may be required by the Purchaser must be shown against each item in the invoice. The Manufacturer is to provide necessary stencil plates for marking. Every piece of bundle shall be marked and in the case of material (shipped to India) all cases or casks shall be clearly cut or branded, not merely painted, with their net and gross weights and with such shipping marks and other particulars as the Inspecting Officer may direct and each bundle shall also have a metal label securely attached with wire stamped with similar marks. The marking shall be done with thick oil paint and in such a manner that it cannot be washed off or obliterated.

All trucks or wagons are to be loaded to as near their full capacity as is consistent with safe transport. While loading the material in wagon, truck or trailer, care should be taken that heavier material is loaded first and lighter material is kept on top so that lighter material is not damaged due to heavy weight. While transporting the material by road, adequate safety precautions shall be taken as per extant instructions.

The Manufacturer shall apply all dunnage and lashing required to hold the material securely in position free of charge.

While handling any girder or girder component it shall be ensured no damage to material takes place in the form of dent/cut mark etc. Wooden blocks, rubber pads shall be used to avoid direct contact between materials to be handled and handling equipment.

CLAUSE NO. 17.0: Delivery Terms

The fabricated bridge items are needed to be delivered in entirety to the Consignee within **04 (four) months** from the date of placement of Order.

CLAUSE NO. 18.0: Despatch

Materials are to be despatched from the Vendor's workshop to the Consignee Address indicated in the P.O. at their own cost after getting Despatch Clearance from GRSE / GRSE's appointed Agency.

CLAUSE NO. 19.0: Documents to be submitted by the Vendor

Documents to be submitted by the vendor during.

19.1. Inspection Call.

19.2. Vendor's in-house inspection report of the items.

19.3. Delivery.

- i. Delivery Challan
- ii. Reports of inspection of GRSE/GRSE's authorised inspection agency carried out for each activity at vendor's premises.
- iii. Warranty Certificate.
- iv. Material Test Certificates.

STANDARD TERMS & CONDITIONS (STAC) OF PURCHASE

CLAUSE NO. 1.0: MICRO & SMALL ENTERPRISE.

- (a). For 20% value of a tender, purchase preference to the tune of 15% to be accorded to all participating MSEs in that particular tender subject to acceptance of lowest quoted price. (This clause is applicable only when the job is divisible in nature and can be distributed to more than one vendor subject to tender terms).
- (b). In case of multiple bidders falling under the above category, purchase preference to be accorded in equal proportion within a limit of quantity allocated for this purpose as above.
- (c). In case of such MSE is owned by SC/ST category entrepreneur, then that organization will be entitled for 4% out of 20% reserved for this purpose and of equal proportion of the 16%.
- (d). MSEs will also be entitled for following benefits:
 - i. Tender documents will be issued free of cost.
 - ii. Exemption for payment of Earnest Money Deposit (EMD).
- (e). Document part II of Entrepreneur memorandum (EM-II) must be submitted along with the offer for such preference to claim the benefit.
- (f). Guidelines regarding procurement from MSME units may be referred to, if any.

CLAUSE NO. 2.0: EARNEST MONEY DEPOSIT (EMD), [If applicable]

- (a). Bidders are not required to submit any amount as EMD / Bid Security in the form of any negotiable instrument against this tender. However, in lieu to that, a **Bid Security Declaration**, has to be submitted as per format enclosed as Annexure-10 with the tender. In case of withdrawal of the bid / fail or refuse to execute the contract / fail or refuse to furnish the security deposit, punitive action will be taken against the bidder by imposition of tender holiday for a period of 03 (three) years.
- (b). MSE registered firms having the tendered service listed in their MSE document will be eligible for exemption from submitting Bid Security Declaration.
- (c). Non-submission of Bid Security Declaration or a valid MSE certificates may lead to offer rejection.

CLAUSE NO. 3.0: PAYMENT TERMS

- (a) 30% of the Total Contract Value shall be paid against procurement of raw steel against submission of equivalent amount of Bank Guarantee valid till completion of the project along with submission of relevant Purchase Documents of Raw Steel.
- (b) 20% of the Total Contract Value shall be paid after successful completion of Trial Assembly of the bridge at Vendor's Yard in presence of GRSE representative(s) and submission of corresponding certificate issued by Third Party Inspection Agency.
- (c) 20% of the Total Contract Value shall be paid after delivery of the bridge components at site.
- (d) Balance 30% of the Total Contract Value shall be paid after successful erection / launching and commissioning of the bridge.
- (e) All bills will be paid within 30 days of submission of bill supported by relevant documents. Payment will be made through ECS only against submission of PBG as per GRSE format.

CLAUSE NO. 4.0: PERFORMANCE GUARANTEE

- (a) A Performance Guarantee of 10% of value of the order in the form of Bank Guarantee of any RBI scheduled Bank (Other than Co-operative Banks) as per GRSE's approved

format will be furnished by the supplier within 2 weeks of placement of order. This guarantee is to remain valid for the entire guarantee period of 24 months.

- (b) Alternatively, 10% of value of the order will be deducted from each bill of the supplier & whole amount will be released after expiry of the guarantee period of 24 months from the date of completion of delivery at site.

CLAUSE NO. 5.0: LIQUIDATED DAMAGE

For delay in delivery, Liquidated Damage (L/D) will be imposed @ ½ % per week or, part thereof on the undelivered portion of the materials, subject to max 5% of the total value of the order. Vendor should note that, in case any material is rejected on receipt at our stores / site before issue of Inspection Clearance Certificate, the delivery date of the same will be considered on the date of actual successful replacement/ due-rectification of the concerned materials by the vendor.

CLAUSE NO. 6.0: WARRANTY/GUARANTEE PERIOD

All the manufactured components should be guaranteed for **24 months from the date of completion of delivery**. In case of any defect, if detected/reported within the Guarantee Period, the same shall be rectified by the contractor free of cost at place where components are kept isolated or at site, due to defective workmanship with respect to its application.

CLAUSE NO. 7.0: RISK PURCHASE

In case the progress of work is not found satisfactory and the contractor fails to maintain the delivery schedule, GRSE reserves the right to get the work done through alternative sources at the risk and cost of the contractor/vendor. "GRSE may also terminate the contract and initiate Risk Purchase at any point of time if it is found that the Vendor has given incorrect/wrong/false declaration regarding its qualification criteria for obtaining the Contract, apart from its right to initiate other proceedings against the Vendor as per law".

CLAUSE NO. 8.0: REPEAT ORDER

No Repeat Order clause is applicable for this tender.

CLAUSE NO. 9.0: PRICE

The quoted rate should be inclusive of statutory Taxes/Levies and other charges as applicable and inclusive of freight upto site (KM 10.150 on Manchuka – Tongkorla – Yarlung Road in Arunachal Pradesh) and other ancillary works at site. The price should remain firm & fixed till complete & satisfactory execution of the entire contract with no escalation applicable, whatsoever. Statutory taxes and duties, as applicable are to be stated specially and separately.

CLAUSE NO. 10.0: METHOD OF QUOTING

- (a). Rate to be quoted on Totality basis, as per the price bid template in the form of Indian Rupees.
(b). L1 bidder to be declared on Total Quoted Rate basis.

CLAUSE NO. 11.0: No conditional offer will be accepted.

CLAUSE NO. 12.0: VALIDITY OF OFFER.

- a. Your offer should remain valid for a period of **120 days** from the due date of opening of tenders.
b. The finalized price / rate will remain **firm & fixed till completion** & satisfactory execution of the **entire contract for period of one year** from date of placement of PO/LOI with no escalation applicable, whatsoever.

CLAUSE NO. 13.0: TAXES & DUTIES

- (a). GST as per prevailing rates would be applicable.
- (b). Any upward revision in taxes & duties or, if imposed beyond contractual delivery period, will be to vendor's A/c.

CLAUSE NO. 14.0: GRSE reserves the right to accept or, reject any/all offers in part/full without assigning any reason whatsoever.

CLAUSE NO. 15.0: SPECIAL NOTE.

- (a). If the service is found unsatisfactory in course of execution of the orders, GRSE will have the right to terminate the contract anytime as per STAC of GRSE.
- (b). When an order is issued to a vendor / Contactor for execution of a particular job, the Contractor shall not sub-contract the job / a part of the job outside their own premises without obtaining prior approval from the ordering authority and without intimation of the name and credentials of the concerned subcontractor to ordering authority.
- (c). GRSE representatives may visit the place of works of the vendor during execution of the order.

CLAUSE NO. 16.0: GRSE reserve the right to enter into separate rate contracts other than these respondents at the L1 negotiated price, terms and conditions.

CLAUSE NO. 17.0: VENDOR REGISTRATION.

- a. The bidders, if registered with the vendor registration cell of GRSE, have to indicate the respective Supplier's 5-digit code no. & group code no. to which they are registered, in the offer.
- b. In case the successful bidder is not an enlisted vendor, the vendor has to get them registered with GRSE as per the standard procedure.

CLAUSE NO. 18.0: ASSIGNMENT.

When an order is issued to a vendor/Contractor for execution of a particular job, the Contractor shall not subcontract the job/a part of the job without obtaining prior approval from the ordering authority and without intimation of the name and credentials of the concerned subcontractor. GRSE representative may visit any time the place of works of the vendor during execution of the order. Further prior written approval shall be required from the ordering authority/GRSE by the contractor for sub-contracting job work/part of work outside the premises of the Contractor.

CLAUSE NO. 19.0: INDIVIDUALITY OF THE CONTRACT

This Contract should be treated as an individual contract and should not be related with other orders/contracts with GRSE, in respect of progress of work or, payment.

CLAUSE NO. 20.0: MANDATORY CLAUSE

Non-disclosure agreement and non-competitive agreement to be signed (as approved) for executing this contract.

CLAUSE NO. 21.0: SECRECY OF INFORMATION

- (a). All drawings/documents are confidential in nature. The contractor should not copy any part of the drawings. The drawings (if issued) must be returned to GRSE while submitting the offers/completion of the particular job.
- (b). Bond of Undertaking and Non-Disclosure Agreement to this effect have to be furnished by the bidder on a non-judicial stamp paper of Rs. 110/- in GRSE format after placement of Order.

CLAUSE NO. 22.0: FORCE MAJEURE

In the event of contractor being unable to fulfil the obligation under the agreement owing to force majeure, such as War, Fire, Earthquake, Flood, Strike, Lockout at GRSE premises where the contractor is working, the party affected shall not be held responsible for any failure or non-performance of the duties and obligations under the agreement, provided that all responsible efforts have been made to overcome the consequences of such failure, or non-performance. The time for performances of the contractual obligation shall then be extended by period not more than the duration of such events. In the event of Force Majeure condition existing at contractor's site on GRSE Premises or CPT areas for GRSE work, GRSE is to be intimated with details of such happenings and cessations thereof, within 3 days. Force Majeure is to be limited to contractor's site in GRSE/CPT premises for GRSE's work only. Strike/Riot/Lock out/Closure of contractor's factory premises or office or any other place outside GRSE/CPT/GRSE nominated place as indicated above cannot be considered as a Force Majeure condition under this contract.

CLAUSE NO. 23.0: ARBITRATION

- (a). If, at any time, before, during or after the contract period, any unsettled claim, question, dispute or difference arises between the parties, upon or in relation to or in connection with or in any way touching or concerning this tender/agreement/supply order (retain whichever is applicable) the same shall be referred to the Chairman & Managing Director (CMD in short) of Garden Reach shipbuilders & Engineers Ltd. (GRSE Ltd in short) for adjudication of the said disputes or differences, as Sole Arbitrator, in accordance with the provisions of Arbitration and Conciliation Act, 1996.
- (b). In the event the parties fail to mutually appoint a Sole Arbitration within 30 days from the receipt of a request by one party from the other, then either of the parties may approach the Hon'ble High Court at Calcutta under the provision of the Arbitration and Conciliation Act, 1996 for appointment of a Sole Arbitration by the Hon'ble Court.
- (c). Such arbitration shall, in all respects, be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 and the rules framed there under or any statutory modification on re- enactment thereof for the time being in force.
- (d). The Award of the Sole Arbitrator shall be final, conclusive and binding upon the parties.
- (e). In the event of the death or resignation or incapacity or whatsoever of the said Sole Arbitrator if appointment by the parties mutually the said parties may again appoint a suitable Substitute Arbitrator in place of the erstwhile Sole Arbitrator to continue with the proceedings. In the event of appointment of the Sole Arbitrator by the Hon'ble High Court At Calcutta on death or resignation or incapacity or whatsoever of the said Sole Arbitrator, either of the parties in this behalf, may make an application to the Hon'ble High Court at Calcutta for appointment of a suitable Arbitrator and the Hon'ble Court may pass such orders as it deems fit and proper.
- (f). Also in the event of an arbitration award is set aside by a competent court the parties may appoint a Sole Arbitration mutually or on failing to appoint a Sole Arbitration Mutually within the statutory period then either of the parties may file the application before the Hon'ble High Court Calcutta under the previous of the Arbitration and Conciliation Act, 1996 for appointment of a Sole Arbitrator by the Hon'ble Court in accordance with the provisions of the Arbitration & Conciliation Act.
- (g). The cost of the arbitration, fees of the arbitrator, remuneration of the stenographer and clerk, stamp paper etc., as shall be decided by the Sole Arbitrator, shall be shared equally by the parties. The venue of arbitration, unless otherwise decided by the parties or by the Sole Arbitrator himself, shall be the premises of Garden Reach Shipbuilders & Engineers Ltd. located at 43/46, Garden Reach Road, Kolkata - 700024.
- (h). The language of the proceeding shall be in English".

CLAUSE NO. 24.0: JURISDICTION

Litigation, if any pertaining to this contract will come under the jurisdiction of the Competent Court at Kolkata.

CLAUSE NO. 25.0: Unless otherwise mentioned all other terms and conditions will be as per General Conditions of purchase of GRSE.

CLAUSE NO. 26.0: Integrity pact (As applicable) as per GRSE format on non-judicial stamp paper of value Rs.110/- must be submitted along with techno commercial bid. Hard copy (original) must be send to the undersigned through speed/courier prior to tender due date. Offer without integrity pact may be rejected.

CLAUSE NO. 27.0: Insurance. The contractor / vendor shall cover all the materials with suitable insurance coverage during transit, at their own cost, as applicable.

ANNEXURE – III

INTEGRITY PACT TO BE EXECUTED FOR HIGH VALUE ORDERS

- 1) IN FORMAT ENCLOSED.
- 2) IN NON – JUDICIAL STAMP PAPER OF VALUE RS.100/-.
- 3) TO BE EXECUTED BY PERSON WITH APPROPRIATE AUTHORITY.

INTEGRITY PACT

Between M/s. Garden Reach Shipbuilders & Engineers Limited (GRSE) hereinafter referred to as “The Principal”

and

..... hereinafter referred to as “the Bidder / Contractor”

The Principal intends to award, under laid down organizational procedures, contract for..... The Principal values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness /transparency in its relations with its Capital Bidder(s)/ or Contractors(s).

In order to achieve these goals, the Principal will appoint an Independent External Monitor (IEM), who will monitor the tender process and the execution of the contract for compliance with the principals mentioned above.

Section 1 - Commitments of the Principal

[1] The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-

- a. No employee of the Principal, personally or through family members, will in connection with the tender for , or the execution of a contract, demand, take a promise for or accept for self or third person, any material or immaterial benefit which the person is not legally entitled to.
- b. The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
- c. The principal will exclude from the process all known prejudiced persons

[2] If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act, or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

Section 2 – Commitments of the Bidder(s)/ Contractor(s)

[1] The Bidder(s) /Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.

a. The Bidder(s) / Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

b. The Bidder(s)/Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

c. The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act; further the Bidder(s)/Contractor(s) will not use improperly, for purpose of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

d. The Bidder(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agents /representatives in India, if any. Similarly the Bidder(s) /Contractor(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any. Further details as mentioned in the "Guidelines on Indian Agents of Foreign Suppliers" shall be disclosed by the Bidder(s) /Contractor(s). Further as mentioned in the Guidelines all the payments made to the Indian agent/representative have to be in Indian Rupees only, copy of the "Guidelines on Indian agent of foreign Supplier" is annexed and marked as annex.

e. The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

[2] The Bidder(s)/ Contractor (s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 – Disqualification from tender process and exclusion from future contracts.

If the Bidder(s)/Contractor(s) before award or during execution has committed a transgression through a violation of Section 2, above or in any other form such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s) /Contractor(s) from the tender process or take action as per the extant procedure of the company.

Section 4 – Compensation for Damages.

(1) If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to section 3, the Principal is entitled to demand and recover the damages equivalent to earnest Money Deposit /Bid Security.

(2) If the principal has terminated the contract according to section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages of the Contract value or the amount equivalent to Performance Bank Guarantee.

Section 5, - Previous Transgression

- (1) The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- (2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or action can be taken as per the procedure mentioned in “Guidelines on Banning of business dealing”.

Section 6 - Equal treatment of all Bidders | Contractors / Sub-contractors.

- (1) The Bidder(s) /Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.
- (2) The Principal will enter into agreements with identical conditions as this one with all Bidders, Contractors and Sub-contractors.
- (3) The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section 7 – Criminal charges against violating Bidder(s) Contractor(s)/ Subcontractor (s)

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the principal has substantive suspicion in this regard, the Principal will inform the same to the Chief Vigilance Officer.

Section 8 – Independent External Monitor /Monitors

- (1) The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- (2) The Monitor is not subject to instructions by the representative of the parties and perform his functions neutrally and independently. He reports to the Chairman of GRSE.
- (3) The Bidder(s) /Contractor(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The monitor is under contractual obligation to treat the information and documents of the Bidder(s) /Contractor(s) / Subcontractor(s) with confidentiality.
- (4) The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor, The parties offer to the Monitor the option to participate in such meetings.
- (5) As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
- (6) The Monitor will submit a written report to the Chairman, GRSE within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.
- (7) Monitor shall be entitled to compensation on the same terms as being extended to / provided to Independent Directors on the GRSE Board.
- (8) If the Monitor has reported to the Chairman GRSE a substantiated suspicion of an offence under relevant IPC/PC Act, and the Chairman GRSE has not, within the reasonable time taken

visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.

(9) The word '**Monitor**' would include both singular and plural.

Section 9 – Pact Duration:

This pact begins when both parties have legally signed it. It expires for the Contractor 18 months after the last payment under the contract, and for all other Bidders 6 months after the contract has been awarded.

If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged / determined by Chairman of GRSE.

Section 10 – Other provisions:

- 1) This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal i.e. Kolkata.
- 2) Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- 3) If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- 4) Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

(For & On behalf of the Principal) (For & On behalf of Bidder/Contractor)
(Office Seal) (Office Seal)

Place.....

Date.....

Witness 1:

(Name & Address)
.....
.....

Witness 2:

(Name & Address)
.....
.....

NON – DISCLOSURE AGREEMENT TO BE EXECUTED ON A NON-JUDICIAL STAMP PAPER OF Rs.110/- TO BE PURCHASED IN THE NAME OF THE CONTRACTOR.

This Non-Disclosure Agreement executed this ____ day of _____, _____

Between

GARDEN RECAH SHIPBUILDERS & ENGINEERS LIMITED, a company incorporated under the provisions of the Companies Act, 1956, having its Registered Office at 43/46, Garden Reach Road, Kolkata – 700 024, hereinafter referred to as “**GRSE**” (which expression shall unless excluded by or repugnant to the subject or context be deemed to mean and include its successor or successors-in-interest and assigns) of the **FIRST PART.**

ARTICLE I. AND

_____, A BODY CORPORATE INCORPORATE UNDER THE companies Act, 1956 having its registered Office at _____, hereinafter referred to as “_____” (which expression shall unless excluded by or repugnant to the subject or context be deemed to mean and include its successor or successors-in-interest and assigns) of the **SECOND PART.**

WHEREAS:

1. A _____ has been concluded on _____, between GRSE and _____ interalia for manufacture and supply of _____ by the said _____ on _____, on the basis of the _____ of GRSE to suit the requirement of its Customers.
2. In course of execution of and/or implementation of the aforesaid _____, the said GRSE will provide necessary drawing and other technical inputs to _____, from time to time, which shall be treated as confidential and the said _____ shall non disclose or part with such drawings and other technical inputs to any other third party, without written consent from GRSE.
3. The said _____ is obliged to execute an undertaking in the form of “Non-Disclosure Agreement” before handing over of the drawings and other technical inputs to them by GRSE, duly promising and/or undertaking to keep such drawings and other technical inputs, strictly confidential.
4. In the Premises aforesaid it is agreed as follows:
 - (a) During the currency of _____ the agreement as aforesaid and also for a period of 10 years from the date of expiry and/or termination of the Agreement and all subsequent agreements, _____, the receiving party of the drawings, undertakes that the drawings, technical inputs an related information shall be:
 - (i) Protected and kept as strictly confidential by them.
 - (ii) Disclosed to and used only by the persons within the organization of the _____, who have a need to know solely for the purpose of manufacturing and or execution of Contract subject to their taking due care and protection of the drawings and inputs.

- (iii) Shall not be used in whole or in part for any purpose other than the purpose of manufacture of the items.
 - (iv) Shall neither be disclosed nor cause to be disclosed directly or indirectly any third party.
 - (v) Neither be copied nor otherwise be reproduced, in whole or in part without express consent from GRSE.
- (b) Nothing in this agreement or the disclosure of the information or data including drawings or inputs, be intended to be granted or shall be construed as granting to _____, any rights, title, interest or license other than the right to use such information, data, drawings, etc, for the purpose of manufacturing of the items.
- (c) Neither party shall resort to any publicity or advertising in respect of this agreement or the subject matter thereof.
- (d) Expiry, foreclosure or termination of the Contract/Agreement or any or all of the subsequent agreements entered into by GRSE and the said _____ in pursuance of Contract, shall not relieve _____ of their obligations under these presents which shall be effective and remain in full force, for a period of 10 years from the date of such expiry, foreclosure or termination.
- (e) In the event of expiry, foreclosure or termination, _____ (Vendor) shall forthwith return to GRSE, all drawings and technical inputs as received by them, during the tenure of the Agreement and/or subsequent agreements.
- (f) Neither party shall assign this agreement without the written consent of the other.
- (g) Failure to enforce any provisions of this agreement and/or failure to initiate timely action, will not construe to be waiver and GRSE shall be freely entitled to enforce the provisions of the agreement at any appropriate time thereafter.

IN WITNESS WHEREOF the Parties have hereunto set and subscribed their respective hands and seals the day, month and year first above written.

FOR GARDEN REACH SHIPBUILDERS & ENGINEERS LTD	FOR _____
Signature:	Signature:
Name:	Name:
Address:	Address:

GUIDELINES FOR SUBMISSION OF BANK GUARANTEE
FORMAT NO. OS/03/0085

- 1) Non- Judicial Stamp Paper – Non-Judicial Stamp Paper of Rs. 60/- (Rupees Fifty Only) is to obtained in the name of the banker for execution of the Bank Guarantee. If a single Stamp Paper of Rs. 60/- is not available, Stamp Papers of multiple denominations may be used but the serial nos. or purpose of each Stamp Paper be of consecutive nos. and purchased on the same day. Such Stamp Paper should not be older than one year or the date of purchase Order/Contract whichever is applicable. Stamp Papers obtained in the name of the supplier will not be accepted.
- 2) Address of the Supplier/Contractor and the executing Bank should be incorporated in full in the Bank Guarantee.
- 3) Bank Guarantee should be executed by scheduled Banks preferably by Nationalized Banks and should be sent in Banker's sealed envelop directly to General Manager (Finance), Corporate Finance. M/s Garden Reach Shipbuilders & Engineers Limited 43/46, Garden Reach Road. Kolkata-700 024 superscribing the word "BANK GUARANTEE".
- 4) No confirmation of B. G. is required to be obtained from issuing Bank if the B. G. executed by Scheduled/Nationalize Banks is received in Banker's sealed envelope.
- 5) Banker's confirmation is required in case of Bank Guarantee executed by Non-Scheduled Banks/Co-operative Bank/Regional Private Bank etc. and for those Guarantee, which were not received in the terms of (3) above.
- 6) The Bank Guarantee should conform strictly in conformity with the terms and Conditions of the order and in GRSE's standard format prescribed against each of the above cases.
- 7) Expiry date should be the accordance with the requirement of contractual terms and the claim period for preferring the claim should not be less than six months from the date of expiry of any case.
- 8) Bank Guarantee shall be free from all infirmities and typographical errors/ deletions/ inclusions/riders etc, requires to be authenticated by Bank's signatory with official seal.
- 9) Issuing Bank should furnish confirmation towards execution of Guarantee immediately on receipt of GRSE's formal letter for same. Confirmation letter should contain GRSE's letter reference requested for and must be in Bank's sealed cover addressed to GRSE.

FORMAT OF BANK GUARANTEE TOWARDS EARNEST MONEY
(To be used by all scheduled Banks)

1. In consideration of M/s. Garden Reach Shipbuilders & Engineers Limited, 43/46, Garden Reach Road, Calcutta-700024 (hereinafter called “the Buyer”) having agreed to exempt M/s (herein after called “the party”) from the demand, under the terms and condition contained in the Tender No..... dated (hereinafter called “the Said ”) of Security Deposit for the due fulfillment by the said party’s of the terms conditions contained in the said Tender on production of a Bank Guarantee for (Rs.....only) we.....Bank Limited (hereinafter referred to as “the Bank”) do hereby undertake to pay Buyer an amount not exceeding Rs against any breach by the said Party of any of the terms & condition contained in the said Tender.
2. We, Bankdo hereby undertake to pay the amounts due and payable under this Guarantee without any reference to the party and without any demur, merely on a demand from the Buyer stating that the amount claimed is due by way of loss of damage caused, to or would be caused, to or suffered by the Buyer by reason of any breach by the said Party of any of the terms of conditions contained in the said Tender or by reason of Party’s failure to perform the said Tender. Any such demand made on the Bank shall be conclusive as regards the amount due to and payable by the Bank under this Guarantee.
3. We, Bank Limited further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of said Tender/Order and that it shall continue to be enforceable till all the dues of the Buyer under or by virtue of the said Tender/Order have been fully paid and its claims satisfied or discharged or till the Managing Director, Garden Reach Shipbuilders & Engineers Limited ,certifies that the terms and condition of the said Tender/Order have been fully & properly and carried out by the said party and accordingly discharge the Guarantee. Unless a demand or claim under this Guarantee is made on us in writing on or before the, We shall be discharged of all liability under this Guarantee thereafter.
4. We, Bank Limited further agree with the Buyer that the Buyer shall have the fullest liberty without our consent and affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Tender/Order or to extend time of performance by the said Party from time to time or to postpone for any time or from time to time any of the powers exercisable by the Buyer against the said Party and to forbear or enforce any of the terms and conditions relating to the said Tender/Order and we shall not be relieved from our liability by reason of any such variation, or extensions being granted to the said Party or for any forbearance, act of omission on the part of the Buyer or any indulgence by the Buyer to the said Party or by any such matter of thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.
5. We Bank Limited lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the Buyer in writing.
6. Notwithstanding anything contained hereinabove, the liability of the Guarantor under this Guarantee is restricted to Rs..... (Rupees.....only), and that this Guarantee shall remain enforce until its expiry on the (date), unless a suit or action to enforce a claim under this Guarantee is made against the Guarantor within six months from the aforesaid date of expiry

, all the rights of beneficiary under the said Guarantee shall be forfeited and the Guarantor shall be released and discharged from all liabilities thereof.

For Bank Limited

Dated the day of..... 2007.

**PROFORMA OF BANK GUARANTEE TOWARDS
SATISFACTORY PERFORMANCE**

THIS DEED OF GUARANTEE made this _____ day of _____ between _____ (hereinafter called "THE BANK") which expression shall, unless excluded by or repugnant to the context, be deemed to include its successors in office and assigns of the ONE part and GARDEN REACH SHIPBUILDERS & ENGINEERS LIMITED, having their Head Office at 43/46, Garden Reach Road, Kolkata – 700 024 (hereinafter called "THE BUYERS") which expression shall unless excluded by or repugnant to the context be deemed to include their successors in office and assigns of the other part.

WHEREAS M/s _____ having its registered office at _____ (hereinafter called "THE SELLER") have accepted an order No. _____, from the Buyer for manufacture and delivery of _____ to Buyer in good condition.

AND WHEREAS it is one of the terms of the said order that the Seller shall furnish to the Buyer a BANK Guarantee comprising _____ % of the value of the order amounting to Rs. _____ (Rupees _____) only for the satisfactory performance of the items/equipments supplied against the said order at least for a period of _____ from the date of last supply, i.e. from _____. AND WHEREAS the seller has agreed to promised and the Buyer has agreed to accept such Bank Guarantee.

NOW THIS INDENTURE WITNESSETH THAT in consideration of the premise the Bank far and on behalf of the seller hereby unequivocally undertakes and agrees with the Buyer to pay to the Buyer without any demur upon demand in writing whenever required so by them so to do and within a fortnight from the date of such demand a sum or sums not exceeding in the whole of Rs. _____ (Rupees _____) only as may become payable to the Buyer by the seller by virtue of or arising out of the Terms and Conditions of the said order. Provided always it is hereby expressly stipulated and agreed that if any question arises as to whether any sum has become payable by the seller to the Buyer by virtue of or arising out of the said order, the decision of the Buyer will be final and conclusive and the Guarantee herein contained shall not be revocable by notice or by reason of dissolution or winding up of the business of the seller or any change in the constitution or composition of the Seller's business and the liability of the Bank under this presents shall not be impaired in any way by any extension of time variation or alteration made given conceded in the conditions of the said order or any other indulgence given by the buyer or by reasons of any failure on the part of the Buyer to enforce any of their remedies against the sellers and / or by reasons of failure on the part of the Buyer to observe or perform any of the stipulations contained in the said order and to be observed or performed by the Sellers or by any other dealings between the Buyer and the seller whether any of the above takes place with or without the knowledge of the Bank and that the Guarantee herein contained shall remain in full force and virtue only. All claims and demands of the Buyer arising out of or in connection with the said order have been fully paid and satisfied PROVIDED ALWAYS AND IT IS HEREBY AGREED BETWEEN THE PARTIES THAT Bank's liability under this Indenture shall remain in full force from the date of issue of the Guarantee till _____ and is limited to a sum of Rs. _____ (Rupees _____) only.

NOTWITHSTANDING anything stated above our liability under the Guarantee is restricted to Rs. _____ (Rupees _____) only. Our Guarantee shall remain in force upto _____ and unless a claim or demand in writing is made on the Bank within 6 months from the date of expiry of the Bank Guarantee the Bank shall be released and discharged from all liabilities thereunder.

ANNEXURE - VIII**DULY NOTARIZED BOND OF UNDERTAKING TO BE EXECUTED ON A NON-JUDICIAL STAMP PAPER OF Rs.110/- TO BE PURCHASED IN THE NAME OF THE CONTRACTOR**

THIS DEED OF UNDERTAKING made this th day of 2011 by M/s a company incorporated under the Companies Act, 1956, having its registered office at.....through its Managing Director Shri..... hereinafter referred to as the 'Contractor', which expression shall unless excluded by or repugnant to the context be deemed to include all its successors in interest and assign in favour of M/s. Garden Reach Shipbuilders & Engineers Limited, a Govt. company incorporated under the companies Act. 1956, having its registered office at 43/46, Garden Reach Road, Kolkata-700 024, hereinafter referred to as the 'Principal', which expression shall unless excluded by or repugnant to the context be deemed to include all its successors in interest and assign.

Whereas the Principal has entered into a contract with the Contractor for..... issuing supply order bearing No..... dated..... (hereinafter referred to as the 'Order').

And whereas it is one of the terms of the said order that the Principal shall supply to the contractor all drawings/technology required for manufacture of the said.....

And whereas it is also one of the terms of the said order that the contractor shall execute and furnish an irrevocable deed of undertaking in terms of which the contractor shall be obliged to utilize the drawing/technology, so supplied by the Principal solely for the purpose of.....under the order and shall also keep the technology/ drawing fully guarded and shall not divulge or, part with the same with any third person or, persons and/or, utilize the same for any purpose other than execution of the order.

Now, in consideration of the aforesaid premises, we, M/s.....do hereby state, confirm and undertake that:

i) We shall keep all the drawings/technology supplied to us by the Principal in our safe custody and shall utilise the same only for the purpose of execution of the order i.e..... All drawings/technology supplied by the Principal, shall be returned by us to the Principal soon after delivery of the goods to the principal but before submission of bills.

ii) We shall keep all the drawings/technology supplied to us by the Principal for the purpose of manufacture of the said in our safe custody and shall not divulge and/or part with the same to the third person or persons and shall not utilise the same for any purpose other than execution of the order. We shall not take out and/or retain and or make any copy of the said drawing/technology and shall return the same to the Principal.

iii) We shall be fully responsible for breach and/or violation of the aforesaid undertaking and decision of the authorized officer of the Principal whether any damage, pecuniary or otherwise has been caused to the Principal consequent to the said breach or violation, shall be final, conclusive and binding upon us.

iv) We shall not subcontract any part of the jobs (i.e.....) against the said order to any other outside vendor without prior written consent of GRSE.

v) We further confirm that we shall not supply these items or similar type of items to any other customer/buyer without prior written approval from GRSE.

vi) This undertaking shall remain valid and/or binding on us at least for a period of 10 (Ten) years from the date of execution of this undertaking.

In witness whereof, this deed of undertaking is executed on the day, month and year written herein above.

Signed, Sealed and Delivered

By Shri.....

Managing Director

In the presence of:-

Signature.....

Name.....

Address.....

FORMAT FOR INDEMNITY BOND
TO BE EXECUTED ON A NON-JUDICIAL STAMP PAPER OF Rs.120/-
TO BE PURCHASED IN THE NAME OF THE CONTRACTOR

This DEED OF INDEMNITY BOND made this..... the day of by M/s , a company incorporated under having its registered office at through its Managing Director, Shri hereinafter referred to as the CONTRACTOR which expression shall unless/excluded by or repugnant to the context be deemed to include all its successors in interest and assign in favour of M/s. Garden Reach Shipbuilders & Engineers Ltd, a Govt. company incorporated under the Companies Act 1956, having its registered office at 43/46, Garden Reach Road. Kolkata-700024 hereinafter referred to as the PRINCIPAL which expression shall unless excluded by or repugnant to the context, be deemed to include all its successors in interest and assigns.

WHEREAS the Principal has awarded to the Contractor a contract for complete manufacture and supply of of Bailey Bridge as per Drg. No. vide its Purchase Order No..... dated (hereinafter called the contract) in terms of which the Principal is required to hand over 'raw materials' to the Contractor for execution of the contract.

And WHEREAS by virtue of Clause No. (...) of Annexure ' I ' of the said contract, the Contractor is required to execute an Indemnity Bond in favour of the Principal for the raw materials handed over to them by the Principal for the purpose of performance of the Contract

NOW THEREFORE, this Indemnity Bond witnessed as follows:-

1. That in consideration of raw materials as mentioned in the Contract, to be handed over to the Contractor in installments from time to time for the performance of the Contract, the Contractor hereby undertakes to indemnify and shall keep the Principal harmless and indemnified of, from and against any consequences, loss or damage caused to the Principal for the full value of materials. The Contractor agrees to acknowledge receipt of the initial installment of the raw materials after actual receipt as per details in the Schedule appended hereto. Further, the Contractor agrees to acknowledge actual receipt of subsequent installments of the raw materials as required from the Principal in the form of Schedules consecutively numbered which shall be attached to this Indemnity Bond so as to form an integral part of this Bond. The Contractor shall hold such raw materials etc. in trust as a "Trustee" for and on behalf of the Principal under their custody.
2. That the Contractor is obliged and shall remain absolutely responsible for the safe transit/protection and custody of the raw materials at their Premises at..... , against all risks whatsoever till the raw materials are worked upon in accordance with the terms of the Contract and are returned and taken over by the Principal. The Contractor undertakes to keep the Principal harmless and indemnified against any loss or damage that may be caused to the raw materials.
3. The Contractor undertakes that the raw materials shall be used exclusively for the purpose of performance/execution of the Contract, strictly in accordance with its terms and conditions and no part of the said raw materials shall be utilized for any other work or purpose whatsoever. It is clearly understood by the Contractor that non-observance of the obligations under this Indemnity Bond by the Contractor shall, inter-alia constitute a criminal breach of trust on the part of the Contractor for all intents and purposes resulting in legal/penal consequences.
4. That the Principal is and shall remain the exclusive owner of the materials free from all encumbrances, charges or liens of any kind, whatsoever. The materials shall at all

times be open to inspection and checking by the General Manager (Engineering) of the Principal, or other employees/agents authorized by him in this regard. Further, the Principal shall always be free at all times to take possession of the raw materials in whatever form the material may be, if in its opinion, the materials are likely to be endangered, mis-utilized or converted to uses other than those specified in the contract, by any act of omission or commission on the part of the Contractor or any other person or on account of any reason whatsoever and the Contractor binds itself and undertakes to comply with the directions of demand of the Principal to return the materials in custody of them without any demur, dispute, contest or reservation.

5. That this Indemnity Bond is irrevocable. If at any time any loss or damage is caused to the materials or the same or any part thereof is mis-utilized in any manner whatsoever, then the Contractor shall be bound to abide by the decision of the General Manager (Engineering) of the Principal as to the assessment of loss or damage to the materials. The Contractor binds itself and undertakes to replace the lost and/or damaged materials at its own cost and/or shall pay the amount of loss to the Principal as assessed and decided by the Principal without any demur, dispute, reservation or protest which is without prejudice to any other right to remedy that may be available to the Principal against the Contractor under the Contract and under this Indemnity Bond.
6. NOW THE CONDITION of this Bond is that if the Contractor shall duly and punctually comply with the terms and conditions of this Bond to the satisfaction of the Principal the above Bond shall be void, but otherwise, it shall remain in full force and virtue.

IN WITNESS WHEREOF, the Contractor has hereunto set its hand through its Managing Director under the common seal of the company, the day month & year first above mentioned.

ARTICLE II. Schedule No.1

Particulars of the material handed over	Quantity	R/R, L/R, C/N, Challan No. and date of Dispatch	Carrier	Value of the raw material	Signature of contractor/ Attorney in token of receipt.
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Subsequent schedules will be numbered and attached.

Section 2.01

Witness:

For and on behalf of

BID SECURITY DECLARATION

Date: DD/MM/YYYY

Bid Ref: _____
Tender Ref: _____

To
M/s. Garden Reach Shipbuilders & Engineers Ltd.
43/46, Garden Reach Road,
Kolkata – 700 024
Kind Attn: (Name & Designation of tender issuing officer)

Dear Sir / Madam,
We the undersigned declare that:

We understand that, according to tender conditions, bids must be supported by a bid Security Declaration.

We accept that we will automatically be suspended from being eligible for bidding in any contract with M/s. GRSE for the period of 03 Years starting from date of opening of price bid, if we are in breach of our obligation(s) under the bid conditions, because we:

Have withdrawn our bid after opening of price bid and within the bid validity specified in the tender; or

Having been notified of the acceptance of our bid by M/s. GRSE Ltd. during the period of bid validity, (i) fail or refuse to execute the contract, if required, or (ii) fail or refuse to furnish the security deposit, in accordance with Article XX of tender.

We understand this bid security declaration shall expire if we are not the successful bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful bidder; or (ii) twenty-eight days after the expiration of our bid.

[Insert signature of authorized representative]

[Insert legal capacity of the person signing the declaration]

[Insert complete name of person signing the declaration]

Duly authorized to sign the bid for and on behalf of [insert complete name of bidder]

Date: DD/MM/YYYY

[Put corporate seal as appropriate]

[Note: In case of a joint venture, the Bid Security Declaration must be in the name of all partners to the Joint Venture that submits the bid.]