

ITEM: PPGI. RIDGE PIECE: 0.60X400X2440

"HEAVY DUTY CLASS" SPECIFICATION CONTINUOUSLY PREPAINTED GALVANISED STEEL SHEETS TO SPECIFICATION I.S: 14246 AS PER FOLLOWING REQUIREMENTS.

BASE METAL : Mild steel as per I.S:513

NOMINAL THICKNESS : 0.60mm (Without negative tolerance)

SIZE: 400 mm X 2440 mm

GALVANISING : The base metal shall be galvanised with minimum Grade of Zinc coating 275gms/sq.m as per I.S:277

TOP SIDE PAINT : Top side coating shall be 20 microns minimum of Silicon Modified Polyester (SMP) painting. colour: BLUE (RAL 5012)

BOTTOM SIDE PAINT : Bottom side coating shall be 7 microns minimum of Silicon Modified Polyester (SMP) painting. colour: Grey (RAL 9002)

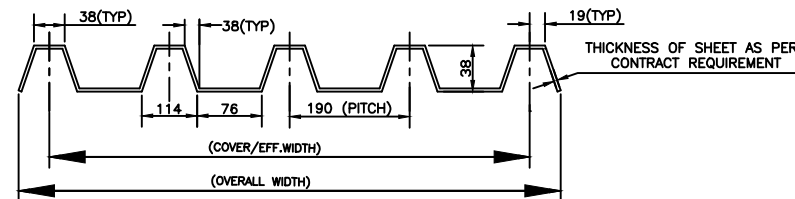
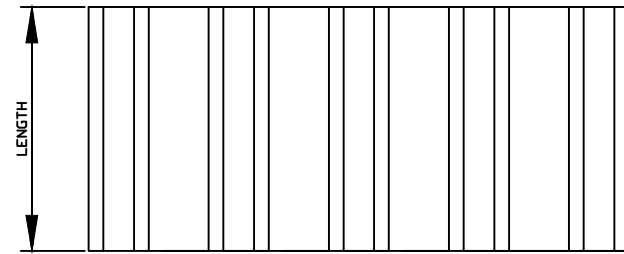
DURABILITY OF PAINT : As per Class – 3 of I.S:14246

Note:

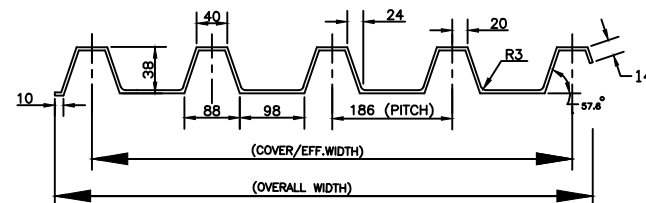
- Ridge Piece shall be as per BHEL Drawing: 3-35-611-80440.
- Packing, Handling and storage of the sheets shall be as per the enclosed Packing, handling and storage instructions.
- BHEL Standard Quality Plan SQPSD02_01 enclosed to be followed

DRAWING NO: 3-35-611-80440

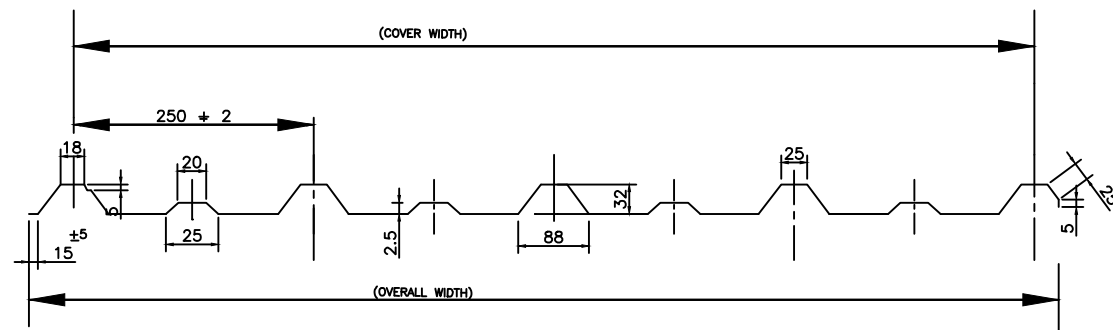
FOR TOLERANCES OF UNTOLERANCED DIMENSIONS DURING MANUFACTURE REFER RELEVANT Q.C.P\Q.P
MANUFACTURING AS PER RELEVANT Q.C.P\S.Q.P



TYPE-1

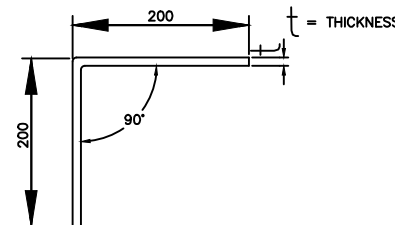
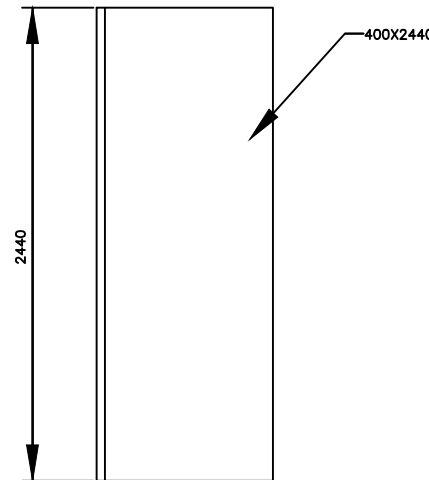


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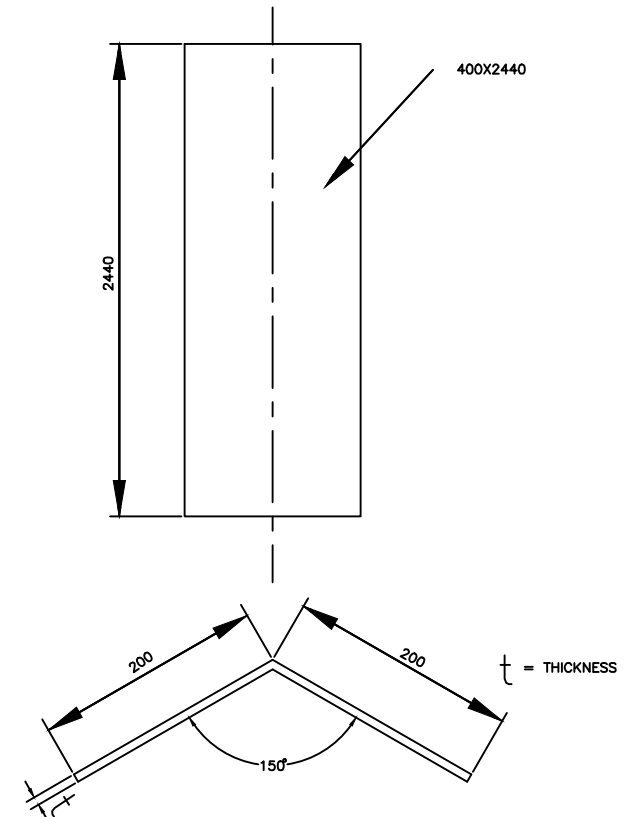


TYPE-3

TRAPEZOIDAL PROFILE SHEET



DETAILS OF BARGE BOARD CORNER PIECE



DETAILS OF RIDGE PIECE

ALL DIMENSIONS ARE IN MM

CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way detrimental to the interest of the company.

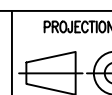
TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT



Bharat Heavy Electricals Ltd
UNIT: HIGH PRESSURE BOILER PLANT
TIRUCHIRAPALLI - 620014

DEPT
FBC & HRSG
CODE
1322

ALL DIMENSIONS
ARE IN MM



SCALE
N.T.S

WEIGHT (Kg)

REF TO ASSY / OLD DWG

DRN	NAME	SIGNATURE	DATE
CHD	V.MUTHUMANI		10.06.10
APPD	S.MURALI SANKAR		10.06.10
	V.RAMACHANDRAN		10.06.10

TITLE
DETAILS OF TRAPEZOIDAL PROFILE SHEET,
BARGE BOARD & RIDGE PIECE

DRAWING NO :
3-35-611-80440
REV
01

BHEL/TRICHY
MM/BOI/PURCHASE

REF:MM:PUR:BOI:ROOFSHEET

Pre-Qualification requirements (PQR) for the procurement of Roof sheets as per specification through Open Tender

Date :

Tender No & Date :

Supplier Name :

Supplier registered Address :

Supplier Plant Address :

A: Organizational Capability & Technical Competence:

Sl. No.	Pre –Qualification Criteria	Bidder acceptance / Bidder remarks
1.	Offers from bidders having basic in house manufacturing facilities for the enquired items are only eligible to participate. Offer from Traders, Distributors are not acceptable and will not be considered for evaluation. Vendor to indicate the nature of the Firm. (Trader/Distributor/Manufacturer). Product catalogue shall be submitted.	
2.	Compliance to Tendered Specification is mandatory for consideration of offer.	
3.	Compliance to Technical requirements & Quality Plan (if applicable) as per tendered specification against each item of enquiry.	
4.	Manufacturing plant address & available equipment's for manufacturing the tendered items shall be provided along with offer.	
5.	Suppliers shall submit Quality Management System certificate or Written down procedure.	
6.	Supplier shall have capacity to meet tender requirement.	
7.	Supplier offer will be considered subject to Customer Approval.	
8.	BHEL reserve the right to inspect the item ordered at any stage at vendor's works and if found not meeting the stipulated conditions, material is liable for rejection.	

B: Past Experience/ Performance:

Sl. No.	Pre –Qualification Criteria	Bidder acceptance / Bidder remarks
1.	Suppliers shall indicate their annual installed capacity for the tendered specification & it shall be more than the tendered quantity.	
2.	Suppliers shall have supplied similar items to the tendered Scope/Specification.	
3.	Suppliers shall submit Supply credentials for last 3 years successful supply of Roof Sheets (i.e. PPGI or PPGL) like unpriced PO copies with corresponding proof of supply (such as invoice/bill of lading copies and test certificates covering shall be submitted.)	
4.	Supplier shall have to submit contact details of the customers to whom successful supply completed.	

BHEL/TRICHY
MM/BOI/PURCHASE

REF:MM:PUR:BOI:ROOFSHEET

Pre-Qualification requirements (PQR) for the procurement of Roof sheets as per specification through Open Tender

C. Financial Soundness:

Sl. No.	Pre –Qualification Criteria	Bidder acceptance / Bidder remarks
1.	Indigenous suppliers shall submit copies of annual reports (balance sheets), profit & Loss Statement for the last three years (or from date of incorporation whichever is less) and GST Certificate.	

Necessary supporting documents shall be submitted for meeting each of the above Pre-Qualification Criteria for technical evaluation of the offers.

BHEL reserves the right to consider/Not-consider the offers based on the evaluation of documents submitted for the above Pre-Qualification Criteria. If required, BHEL also reserves the right to verify information submitted by vendor. In case the information is found false/incorrect, the offer shall be rejected. BHEL also reserves the right to carry out audit checks for confirming the material properties on the supplied material during material receipt at BHEL. Supplies found defective during check or subsequent processing at BHEL will be rejected.

PACKING METHOD

PACKING DETAILS FOR PRE COATED GALVANIZED ROOF SHEET, PRECOATED GALVALUME ROOF SHEET, RIDGE PIECE, CORNER BARGE BOARD AND PLAIN SHEETS

Packing material for Pre Coated Products:

Sl No	Packing Materials(Layers)	Nos
1	LDPE	1
2	HDPE	1
3	Metal Box	1
4	Wooden pallet/Wooden Skid at bottom	Top metal box over bottom box as shown in figure-1
5	High tensile packing straps & tags	Along length 2, Along width every 1 m length + 2 tags.

SHEET PACKING:

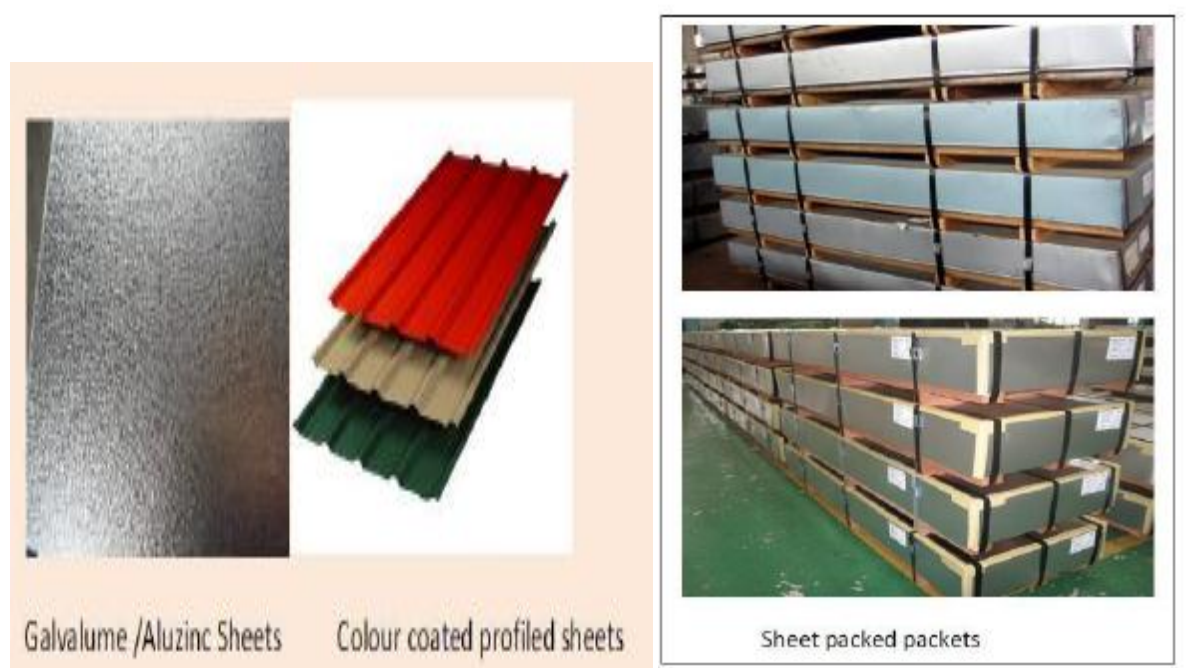
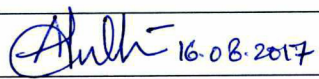


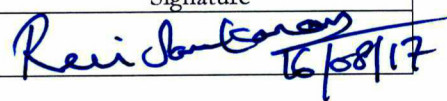
Figure-1

	BHARAT HEAVY ELECTRICALS LIMITED TIRUCHIRAPPALLI - 620 014, INDIA. QUALITY ASSURANCE DEPARTMENT
	STANDARD QUALITY PLAN FOR PRE-PAINTED GALVANIZED STEEL SHEETS SQP:SD:02 Rev No: 01

Page: 1 of 3

Prepared By Quality Assurance	ABDUR RAHMAN SULTAN  16.08.2017
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Reviewed by	Signature
Quality Assurance (G. PANNERSELVAM)	
Engineering (M - SHANMUGAM)	
Materials Management (M. RADHAKRISHNAN)	
Quality Control R. DHARMAR	

Rev No	Date	Approved by	Signature
01	16/08/2017	AGM / QA & BE	 16/08/17

Record of Revisions

Rev No	Details of Revision	Remarks
00	Fresh Issue	
01	Cl. 1.0 , 3.1 to 3.5 revised, 3.6 to 3.8 removed based on feedback from MM	Raw material sources removed, Quantum of testing revised.

बी एच ई एल 		MANUFACTURER'S NAME & ADDRESS: BHEL TIRUCHIRAPPALLI APPROVED SUPPLIERS		STANDARD QUALITY PLAN							QWI NO:SQP:SD:02			
				PRODUCT: PRE-PAINTED GALVANIZED STEEL SHEETS							REV NO: 01 DATE: 16/08/2017			
				SUB-SYSTEM :Steam Generator and Auxiliaries							PAGE: 2 OF 3			
SL. NO	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY			REMARKS	
					M	C/N				M	C	N		
1	2	3	4	5	M	C/N	7	8	9	D*	**	10	11	

1.0	RAW MATERIALS													
1.0	Steel Sheets/Coils	Chemical & Mechanical Properties (YS, TS, %Elong), Hardness, Cupping & bend tests	A	TC Verification	IS 513	IS 513	IS 513 & BHEL PO	IS 513 – Design CR1 Gr 390 & BHEL PO	MTC	√	P	V	V	
		Surface Finish	B	Visual	IS 513	IS 513	IS 513	Cl 8 of IS 513	MTC	√	P	V	-	
		Freedom from defects	B	Visual	IS 513	IS 513	IS 513	Cl 9 of IS 513	MTC	√	P	V	-	
		Dimensions	B	Measurement	IS 513	IS 513	IS 513	BHEL PO	MTC	√	P	V	-	
2.0	INPROCESS CONTROLS													
GALVANIZING														
2.1	Steel Sheets/Coils	Cleaning & Degreasing	A	Visual	100%	100%	IS 277 & BHEL PO	IS 277 & BHEL PO	Log	√	P	V	-	
2.2	Zinc Ingots*	Chemical properties	B	TC Verification	100%	100%	IS 209/ IS 13229	IS 209/ IS 13229	MTC	√	P	V	-	*Grade G250
2.3	Galvanization	Galvanizing	A	Visual	100%	100%	IS 277 & BHEL PO	IS 277 & BHEL PO	MTC	√	P	V	-	
2.4	Bend Test for zinc coating	Peeling of, flaking, cracking	B	Visual	Cl 8 of IS 277	Cl 8 of IS 277	Cl 8 of IS 277 & BHEL PO	Cl 8 of IS 277 & BHEL PO	IR	√	P	V	-	
2.5	Zinc Coating Test	Weight of coating of galvanizing*	B	Measurements	Cl 9 of IS 277	Cl 9 of IS 277	IS 277 & BHEL PO	IS 277 & BHEL PO	IR	√	P	V	-	*both sides inclusive: 275 gsm
2.6	Galvanized sheets/coils	Surface Finish	B	Visual	100%	100%	Cl 11 of IS 277	Cl 11 of IS 277	IR	√	P	V	-	
PAINTING & CORRUGATION														
2.7	Paint Coating Selection	Paint Class, viscosity, etc.	B	Visual	100%	100%	BHEL PO	BHEL PO	MTC	√	P	V	-	
2.8	Alkali Cleaning; Rinsing with Hot & cold water*;	Cleanliness of galvanized Sheets before painting	A	Visual	100%	100%	Manufacturer’s std	Freedom from oil, grease, dirt.	Log	√	P	V	-	* followed by Chromate soln treatment at room temperature
2.9	Painting: Primer on both sides; Top & bottom coats	Surface Preparation, Color Shade & DFT	B	Visual & Measurement	100%	100%	BHEL PO	BHEL PO	IR	√	P	V	-	
2.10	Corrugation of sheets *	Shape, Surface finish, peeling of paint on both sides	A	Visual	100%	100%	IS 277 & BHEL PO	IS 277 & BHEL PO	IR	√	P	V	-	*if applicable

LEGEND: * RECORDS IDENTIFIED WITH "TICK" (√) SHALL BE ESSENTIALLY INCLUDED BY THE SUPPLIER IN QA DOCUMENTATION;
**** M:** MANUFACTURER (COIL/PROFILER), **C:** BHEL QC/BHEL AIA, **N:** CUSTOMER; **P:** PERFORM. **W:** WITNESS, **V:** VERIFICATION; **CLASS :** A - CRITICAL ; B - MAJOR ; C – MINOR;
MTC- Mill /Manufacturer's Test Certificate; IR- Inspection/Test Report; (R): Routine test; (I)/(Ts): Type test.

बी एच ई एल BHEL		MANUFACTURER'S NAME & ADDRESS: BHEL TIRUCHIRAPPALLI APPROVED SUPPLIERS		STANDARD QUALITY PLAN							QWI NO:SQP:SD:02			
				PRODUCT: PRE-PAINTED GALVANIZED STEEL SHEETS							REV NO: 01 DATE: 16/08/2017			
				SUB-SYSTEM :Steam Generator and Auxiliaries							PAGE: 3 OF 3			
SL. NO	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY			REMARKS	
					M	C/N				M	C	N		
1	2	3	4	5	M	C/N	7	8	9	D*	**	10	11	

2.11	Sheets	Dimensions of Corrugated/plane sheets	B	Measurements	100%	100%	BHEL PO & BHEL approved drawing	BHEL PO & BHEL approved drawing	IR	√	P	V	-	
3	TESTING ON PAINTED COILS/SHEETS – Tests shall be done at manufacturer’s lab or NABL accredited labs.													
3.1	Bend Test	Peeling or crack of Paint	B	Visual	1 per 10 Tonnes	1 per 10 Tonnes	Cl 6.2 of IS 14246	Cl 6.2 of IS 14246*	IR	√	P	V	V	*No peeling or cracking of paint.
3.2	Pencil Hardness Test (2H)	Scratch proof	B	Visual	1 per 10 Tonnes	1 per 10 Tonnes	Cl 6.3 of IS 14246	Cl 6.3 of IS 14246#	IR	√	P	V	V	#No scratch
3.3	Impact Resistance Test	Impact resistance	B	Visual	1 per 10 Tonnes	1 per 10 Tonnes	Cl 6.4 of IS 14246	Cl 6.4 of IS 14246*	IR	√	P	V	V	*No peeling or cracking of paint.
3.4	Cross Hatch Test	No lifting of paint	B	Visual	1 per 10 Tonnes	1 per 10 Tonnes	Cl 6.5 of IS 14246	Cl 6.5 of IS 14246#	IR	√	P	V	V	#No lifting of paint.
3.5	Salt Spray Test	Corrosion Resistance/ Durability of paint	B	Visual & Measurement	1 per 10 Tonnes	1 per 10 Tonnes	Cl 6.6 & 5.4 of IS 14246 & BHEL Specn.	Cl 6.6 & 5.4 of IS 14246 & BHEL Specn.	MTC /IR	√	P	V	V	
4.0	FINAL INSPECTION													
4.1	Dimensional Inspection	Dimensions & Shapes	B	Visual & Measurement	100%	Min 1, max 10 *	BHEL PO & BHEL approved drawing		IR	√	P	W	V	*at random for each PO item.
4.2	Paint Inspection	Color, Shade & DFT	C		100%		BHEL PO	BHEL PO	IR	√	P	W	V	
4.3	Marking & Identification	PO no, Item, Material No, Project Name	B	Visual	100%		BHEL PO	BHEL PO	IR	√	P	W	V	
4.4	Packing along with Handling & Storage instructions to Sites@	Water-proof packing & Stability	B	Visual	100%		BHEL PO	BHEL PO	IR	√	P	W	-	@shall be available on each pack of sheets.

Notes:

- For Customer inspection, if applicable, the stages indicated under Column N shall be followed with specific approval of BHEL/Customer for Witness/Verification by Customer.
- The latest editions/revisions of the above mentioned/referred standards/procedures shall be used.

LEGEND: * RECORDS IDENTIFIED WITH "TICK" (√) SHALL BE ESSENTIALLY INCLUDED BY THE SUPPLIER IN QA DOCUMENTATION;
**** M:** MANUFACTURER (COIL/PROFILER), **C:** BHEL QC/BHEL AIA, **N:** CUSTOMER; **P:** PERFORM. **W:** WITNESS, **V:** VERIFICATION; **CLASS:** A - CRITICAL ; B - MAJOR ; C – MINOR;
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Handling and storage of coated steel products

Must be pasted on all packets clearly visible from outside

For longer life/durability after application, no wastage/damage of coated steel products below handling and storage guidelines are very important.

Handling

- 1) Use nylon/fiber felts for Handling. Do not use steel Wire rope/chains lifting /downloading / Moving
- 2) Use cushioning (wood /rubber) at bottom of & secure lashing & dunnaging **while** transportation.
- 3) Do not transport materials with water/chemicals/vegetables / animals/cement....
- 4) Unload carefully; avoid any packing damages due to unloading/handling.
- 5) If received wet & with damaged packing, Unpack, dry & repack.

Storage

- 1) Store materials on wooden support well over the flat & clean dry floor & temperature below 50°C.
- 2) Do not store materials on wet, damp, muddy floors /lands **directly**. If no option, use about 2 feet steel/ wooden platforms over such places for storing for only for few days.
- 3) Store in well ventilated, dry & protected from rain godowns/shades.
- 4) After Unpacking use materials within couple of days & balance materials remains if any, repack and store for further use.
- 5) Store away from chemicals / cement & any wet materials.

ITEM: PPGL TRAPEZOIDAL PROFILE ROOF SHEET: 0.60X1060X4350

"HEAVY DUTY CLASS" SPECIFICATION CONTINUOUSLY PREPAINTED GALVANISED STEEL SHEETS TO SPECIFICATION I.S: 14246 AS PER FOLLOWING REQUIREMENTS.

BASE METAL : Mild steel as per I.S:513

NOMINAL THICKNESS : 0.60mm (Without negative tolerance)

SIZE : 1060mm X 4350mm

GALVANISING : The base metal shall be galvanised with minimum Grade of Zinc coating 275gms/sq.m as per I.S:277

TOP SIDE PAINT : Top side coating shall be 20 microns minimum of Silicon Modified Polyester (SMP) painting. colour: BLUE (RAL 5012)

BOTTOM SIDE PAINT : Bottom side coating shall be 7 microns minimum of Silicon Modified Polyester (SMP) painting. colour: Grey (RAL 9002)

DURABILITY OF PAINT : As per Class – 3 of I.S:14246

CORRUGATION PROFILE: As per BHEL drawing no 3-35-611-80440 Rev 01 or suppliers own profile satisfying following requirements of BHEL, (supplier to submit design calculations)

The corrugated sheet should be capable of resisting within the safe limit,

- a. Maximum purlin spacing – 1300 mm
- b. Deflection criteria -- $L/250$
- c. Live load -- 1.50 KN /Sq.m (roof slope <10 degree)
- d. Wind load -- 2.25 KN/Sq.m
- e. Load Combination for Trapezoidal / corrugated Sheet is:
 - 1) 100%(Self Weight / Dead load + Live Load (1.5 KN /SQM) + Wind load (2.25 KN/SQM)), without any reduction factor.
 - 2) 100%(Self Weight / Dead load +/- Wind load (2.25 KN/SQM)), without any reduction factor.

NOTE:

- Packing, Handling and storage of the sheets shall be as per the enclosed Packing, handling and storage instructions.
- BHEL Standard Quality Plan SQPSD02_01 enclosed to be followed.

BHEL/TRICHY
MM/BOI/PURCHASE

REF:MM:PUR:BOI:ROOFSHEET

Pre-Qualification requirements (PQR) for the procurement of Roof sheets as per specification through Open Tender

Date :

Tender No & Date :

Supplier Name :

Supplier registered Address :

Supplier Plant Address :

A: Organizational Capability & Technical Competence:

Sl. No.	Pre –Qualification Criteria	Bidder acceptance / Bidder remarks
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2.	Compliance to Tendered Specification is mandatory for consideration of offer.	
3.	Compliance to Technical requirements & Quality Plan (if applicable) as per tendered specification against each item of enquiry.	
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5.	Suppliers shall submit Quality Management System certificate or Written down procedure.	
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7.	Supplier offer will be considered subject to Customer Approval.	
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B: Past Experience/ Performance:

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1.	Suppliers shall indicate their annual installed capacity for the tendered specification & it shall be more than the tendered quantity.	
2.	Suppliers shall have supplied similar items to the tendered Scope/Specification.	
3.	Suppliers shall submit Supply credentials for last 3 years successful supply of Roof Sheets (i.e. PPGI or PPGL) like unpriced PO copies with corresponding proof of supply (such as invoice/bill of lading copies and test certificates covering shall be submitted.)	
4.	Supplier shall have to submit contact details of the customers to whom successful supply completed.	

BHEL/TRICHY
MM/BOI/PURCHASE

REF:MM:PUR:BOI:ROOFSHEET

Pre-Qualification requirements (PQR) for the procurement of Roof sheets as per specification through Open Tender

C. Financial Soundness:

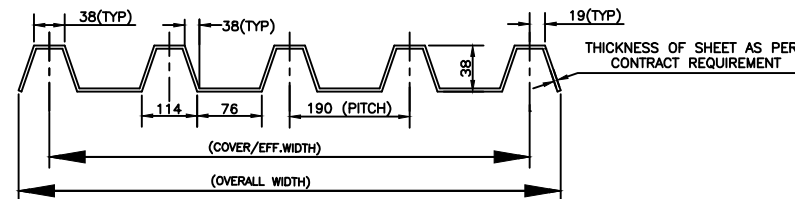
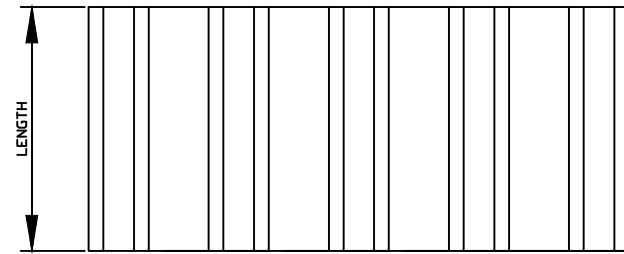
Sl. No.	Pre –Qualification Criteria	Bidder acceptance / Bidder remarks
1.	Indigenous suppliers shall submit copies of annual reports (balance sheets), profit & Loss Statement for the last three years (or from date of incorporation whichever is less) and GST Certificate.	

Necessary supporting documents shall be submitted for meeting each of the above Pre-Qualification Criteria for technical evaluation of the offers.

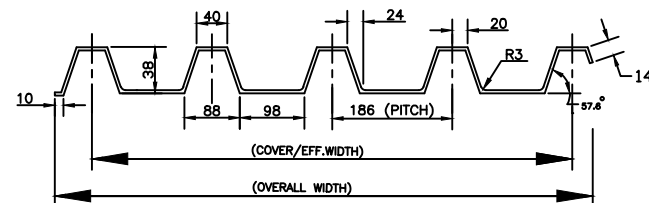
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DRAWING NO: 3-35-611-80440

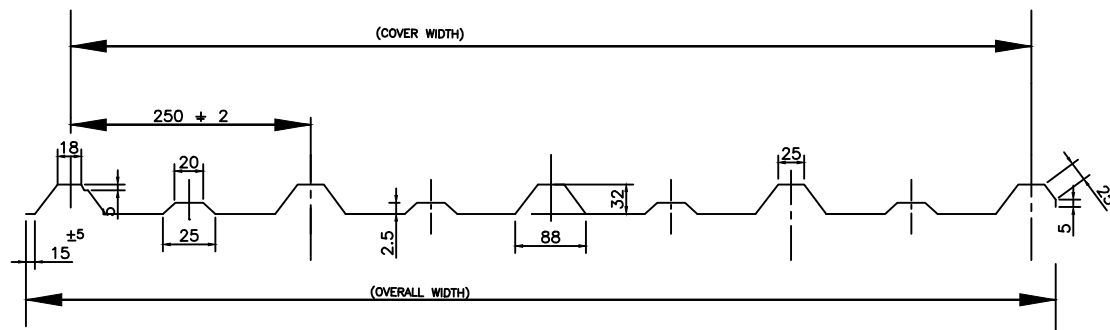
FOR TOLERANCES OF UNTOLERANCED DIMENSIONS DURING MANUFACTURE REFER RELEVANT Q.C.P\Q.P
MANUFACTURING AS PER RELEVANT Q.C.P\S.Q.P



TYPE-1

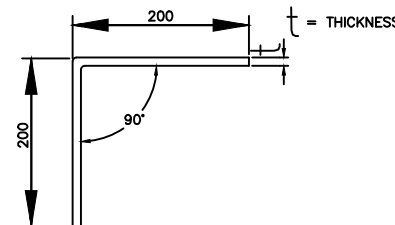
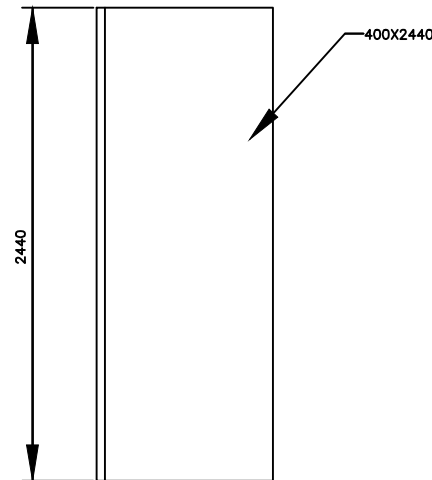


TYPE-2

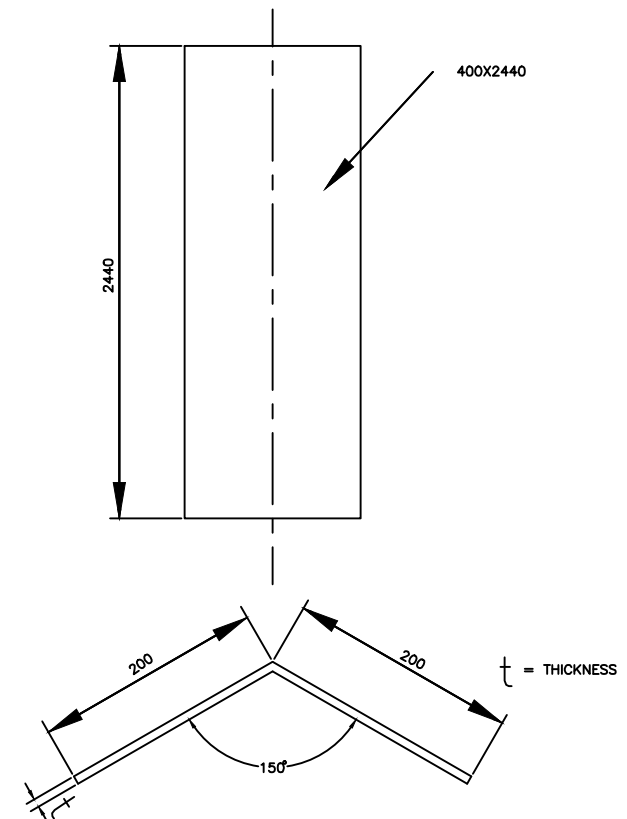


TYPE-3

TRAPEZOIDAL PROFILE SHEET



DETAILS OF BARGE BOARD CORNER PIECE



DETAILS OF RIDGE PIECE

ALL DIMENSIONS ARE IN MM

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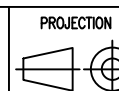
TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT



Bharat Heavy Electricals Ltd
UNIT: HIGH PRESSURE BOILER PLANT
TIRUCHIRAPALLI - 620014

DEPT
FBC & HRSG
CODE
1322

ALL DIMENSIONS
ARE IN MM



SCALE
N.T.S

WEIGHT (Kg)

REF TO ASSY / OLD DWG

DRN	NAME	SIGNATURE	DATE
CHD	V.MUTHUMANI		10.06.10
APPD	S.MURALI SANKAR		10.06.10
	V.RAMACHANDRAN		10.06.10

TITLE
DETAILS OF TRAPEZOIDAL PROFILE SHEET,
BARGE BOARD & RIDGE PIECE

DRAWING NO :
3-35-611-80440
REV
01

Handling and storage of coated steel products

Must be pasted on all packets clearly visible from outside

For longer life/durability after application, no wastage/damage of coated steel products below handling and storage guidelines are very important.

Handling

- 1) Use nylon/fiber felts for Handling. Do not use steel Wire rope/chains lifting /downloading / Moving
- 2) Use cushioning (wood /rubber) at bottom of & secure lashing & dunnaging **while** transportation.
- 3) Do not transport materials with water/chemicals/vegetables / animals/cement....
- 4) Unload carefully; avoid any packing damages due to unloading/handling.
- 5) If received wet & with damaged packing, Unpack, dry & repack.

Storage

- 1) Store materials on wooden support well over the flat & clean dry floor & temperature below 50°C.
- 2) Do not store materials on wet, damp, muddy floors /lands **directly**. If no option, use about 2 feet steel/ wooden platforms over such places for storing for only for few days.
- 3) Store in well ventilated, dry & protected from rain godowns/shades.
- 4) After Unpacking use materials within couple of days & balance materials remains if any, repack and store for further use.
- 5) Store away from chemicals / cement & any wet materials.

PACKING METHOD

PACKING DETAILS FOR PRE COATED GALVANIZED ROOF SHEET, PRECOATED GALVALUME ROOF SHEET, RIDGE PIECE, CORNER BARGE BOARD AND PLAIN SHEETS

Packing material for Pre Coated Products:

Sl No	Packing Materials(Layers)	Nos
1	LDPE	1
2	HDPE	1
3	Metal Box	1
4	Wooden pallet/Wooden Skid at bottom	Top metal box over bottom box as shown in figure-1
5	High tensile packing straps & tags	Along length 2, Along width every 1 m length + 2 tags.

SHEET PACKING:

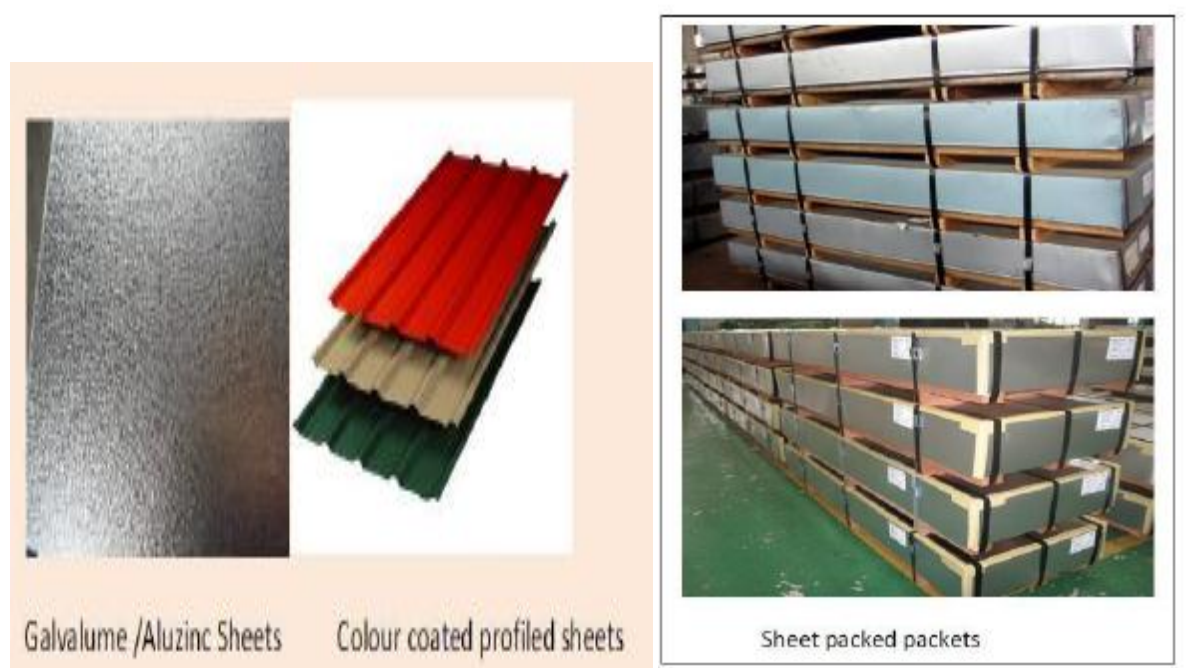
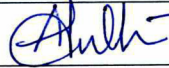
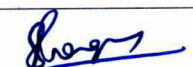


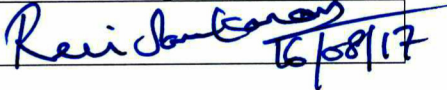
Figure-1

	BHARAT HEAVY ELECTRICALS LIMITED TIRUCHIRAPPALLI - 620 014, INDIA. QUALITY ASSURANCE DEPARTMENT
	STANDARD QUALITY PLAN FOR PRE-PAINTED GALVANIZED STEEL SHEETS SQP:SD:02 Rev No: 01

Page: 1 of 3

Prepared By Quality Assurance	ABDUR RAHMAN SULTAN 	16.08.2017
----------------------------------	--	------------

Reviewed by	Signature
Quality Assurance (G. PANNESSELVAM)	
Engineering (M - SHANMUGAM)	
Materials Management (M. RADHAKRISHNAN)	
Quality Control R. DHARMAR	

Rev No	Date	Approved by	Signature
01	16/08/2017	AGM / QA & BE	

Record of Revisions

Rev No	Details of Revision	Remarks
00	Fresh Issue	
01	Cl. 1.0 , 3.1 to 3.5 revised, 3.6 to 3.8 removed based on feedback from MM	Raw material sources removed, Quantum of testing revised.

Proprietary Data - For Internal Use Only

बी एच ई एल BHEL		MANUFACTURER'S NAME & ADDRESS: BHEL TIRUCHIRAPPALLI APPROVED SUPPLIERS		STANDARD QUALITY PLAN							QWI NO:SQP:SD:02			
				PRODUCT: PRE-PAINTED GALVANIZED STEEL SHEETS							REV NO: 01 DATE: 16/08/2017			
				SUB-SYSTEM :Steam Generator and Auxiliaries							PAGE: 2 OF 3			
SL. NO	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY			REMARKS	
					M	C/N				M	C	N		
1	2	3	4	5	M	C/N	7	8	9	D*	**	10	11	

1.0	RAW MATERIALS													
1.0	Steel Sheets/Coils	Chemical & Mechanical Properties (YS, TS, %Elong), Hardness, Cupping & bend tests	A	TC Verification	IS 513	IS 513	IS 513 & BHEL PO	IS 513 – Design CR1 Gr 390 & BHEL PO	MTC	√	P	V	V	
		Surface Finish	B	Visual	IS 513	IS 513	IS 513	Cl 8 of IS 513	MTC	√	P	V	-	
		Freedom from defects	B	Visual	IS 513	IS 513	IS 513	Cl 9 of IS 513	MTC	√	P	V	-	
		Dimensions	B	Measurement	IS 513	IS 513	IS 513	BHEL PO	MTC	√	P	V	-	
2.0	INPROCESS CONTROLS													
GALVANIZING														
2.1	Steel Sheets/Coils	Cleaning & Degreasing	A	Visual	100%	100%	IS 277 & BHEL PO	IS 277 & BHEL PO	Log	√	P	V	-	
2.2	Zinc Ingots*	Chemical properties	B	TC Verification	100%	100%	IS 209/ IS 13229	IS 209/ IS 13229	MTC	√	P	V	-	*Grade G250
2.3	Galvanization	Galvanizing	A	Visual	100%	100%	IS 277 & BHEL PO	IS 277 & BHEL PO	MTC	√	P	V	-	
2.4	Bend Test for zinc coating	Peeling of, flaking, cracking	B	Visual	Cl 8 of IS 277	Cl 8 of IS 277	Cl 8 of IS 277 & BHEL PO	Cl 8 of IS 277 & BHEL PO	IR	√	P	V	-	
2.5	Zinc Coating Test	Weight of coating of galvanizing*	B	Measurements	Cl 9 of IS 277	Cl 9 of IS 277	IS 277 & BHEL PO	IS 277 & BHEL PO	IR	√	P	V	-	*both sides inclusive: 275 gsm
2.6	Galvanized sheets/coils	Surface Finish	B	Visual	100%	100%	Cl 11 of IS 277	Cl 11 of IS 277	IR	√	P	V	-	
PAINTING & CORRUGATION														
2.7	Paint Coating Selection	Paint Class, viscosity, etc.	B	Visual	100%	100%	BHEL PO	BHEL PO	MTC	√	P	V	-	
2.8	Alkali Cleaning; Rinsing with Hot & cold water*;	Cleanliness of galvanized Sheets before painting	A	Visual	100%	100%	Manufacturer's std	Freedom from oil, grease, dirt.	Log	√	P	V	-	* followed by Chromate soln treatment at room temperature
2.9	Painting: Primer on both sides; Top & bottom coats	Surface Preparation, Color Shade & DFT	B	Visual & Measurement	100%	100%	BHEL PO	BHEL PO	IR	√	P	V	-	
2.10	Corrugation of sheets *	Shape, Surface finish, peeling of paint on both sides	A	Visual	100%	100%	IS 277 & BHEL PO	IS 277 & BHEL PO	IR	√	P	V	-	*if applicable

LEGEND: * RECORDS IDENTIFIED WITH "TICK" (√) SHALL BE ESSENTIALLY INCLUDED BY THE SUPPLIER IN QA DOCUMENTATION;
**** M:** MANUFACTURER (COIL/PROFILER), **C:** BHEL QC/BHEL AIA, **N:** CUSTOMER; **P:** PERFORM. **W:** WITNESS, **V:** VERIFICATION; **CLASS :** A - CRITICAL ; B - MAJOR ; C – MINOR;
MTC- Mill /Manufacturer's Test Certificate; IR- Inspection/Test Report; (R): Routine test; (I)/(Ts): Type test.

बी एच ई एल BHEL		MANUFACTURER'S NAME & ADDRESS: BHEL TIRUCHIRAPPALLI APPROVED SUPPLIERS		STANDARD QUALITY PLAN							QWI NO:SQP:SD:02			
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					M	C/N	7	8	9	D*	M	C	N	
1	2	3	4	5	M	C/N	7	8	9	D*	**	10		11

2.11	Sheets	Dimensions of Corrugated/plane sheets	B	Measurements	100%	100%	BHEL PO & BHEL approved drawing	BHEL PO & BHEL approved drawing	IR	√	P	V	-	
3	TESTING ON PAINTED COILS/SHEETS – Tests shall be done at manufacturer's lab or NABL accredited labs.													
3.1	Bend Test	Peeling or crack of Paint	B	Visual	1 per 10 Tonnes	1 per 10 Tonnes	Cl 6.2 of IS 14246	Cl 6.2 of IS 14246*	IR	√	P	V	V	*No peeling or cracking of paint.
3.2	Pencil Hardness Test (2H)	Scratch proof	B	Visual	1 per 10 Tonnes	1 per 10 Tonnes	Cl 6.3 of IS 14246	Cl 6.3 of IS 14246#	IR	√	P	V	V	#No scratch
3.3	Impact Resistance Test	Impact resistance	B	Visual	1 per 10 Tonnes	1 per 10 Tonnes	Cl 6.4 of IS 14246	Cl 6.4 of IS 14246*	IR	√	P	V	V	*No peeling or cracking of paint.
3.4	Cross Hatch Test	No lifting of paint	B	Visual	1 per 10 Tonnes	1 per 10 Tonnes	Cl 6.5 of IS 14246	Cl 6.5 of IS 14246#	IR	√	P	V	V	#No lifting of paint.
3.5	Salt Spray Test	Corrosion Resistance/ Durability of paint	B	Visual & Measurement	1 per 10 Tonnes	1 per 10 Tonnes	Cl 6.6 & 5.4 of IS 14246 & BHEL Specn.	Cl 6.6 & 5.4 of IS 14246 & BHEL Specn.	MTC /IR	√	P	V	V	
4.0	FINAL INSPECTION													
4.1	Dimensional Inspection	Dimensions & Shapes	B	Visual & Measurement	100%	Min 1, max 10 *	BHEL PO & BHEL approved drawing		IR	√	P	W	V	*at random for each PO item.
4.2	Paint Inspection	Color, Shade & DFT	C		100%		BHEL PO	BHEL PO	IR	√	P	W	V	
4.3	Marking & Identification	PO no, Item, Material No, Project Name	B	Visual	100%		BHEL PO	BHEL PO	IR	√	P	W	V	
4.4	Packing along with Handling & Storage instructions to Sites@	Water-proof packing & Stability	B	Visual	100%		BHEL PO	BHEL PO	IR	√	P	W	-	@shall be available on each pack of sheets.

Notes:

- For Customer inspection, if applicable, the stages indicated under Column N shall be followed with specific approval of BHEL/Customer for Witness/Verification by Customer.
- The latest editions/revisions of the above mentioned/referred standards/procedures shall be used.

LEGEND: * RECORDS IDENTIFIED WITH "TICK" (√) SHALL BE ESSENTIALLY INCLUDED BY THE SUPPLIER IN QA DOCUMENTATION;
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ITEM: PPGL CORNER BARGE: 0.60X400X2440

"HEAVY DUTY CLASS" SPECIFICATION CONTINUOUSLY PREPAINTED GALVANISED STEEL SHEETS TO SPECIFICATION I.S: 14246 AS PER FOLLOWING REQUIREMENTS.

BASE METAL : Mild steel as per I.S:513

NOMINAL THICKNESS : 0.60mm (Without negative tolerance)

SIZE: 400 mm X 2440 mm

GALVANISING : The base metal shall be galvanised with minimum Grade of Zinc coating 275gms/sq.m as per I.S:277

TOP SIDE PAINT : Top side coating shall be 20 microns minimum of Silicon Modified Polyester (SMP) painting. colour: BLUE (RAL 5012)

BOTTOM SIDE PAINT : Bottom side coating shall be 7 microns minimum of Silicon Modified Polyester (SMP) painting. colour: Grey (RAL 9002)

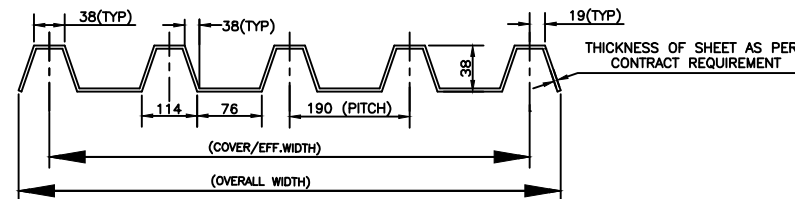
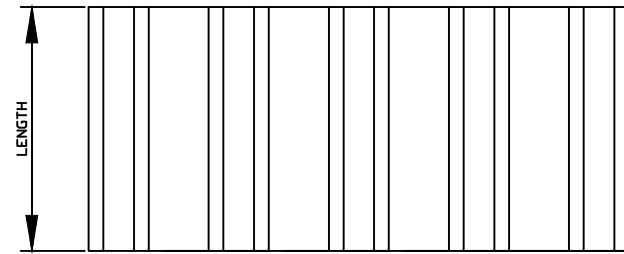
DURABILITY OF PAINT : As per Class – 3 of I.S:14246

Note:

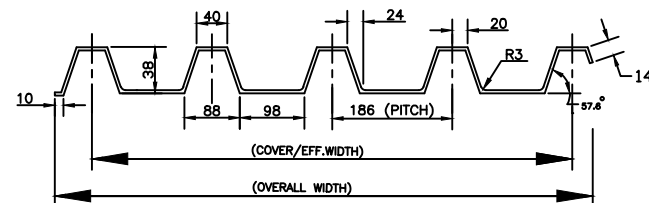
- Corner Barge shall be as per BHEL Drawing: 3-35-611-80440.
- Packing, Handling and storage of the sheets shall be as per the enclosed Packing, handling and storage instructions.
- BHEL Standard Quality Plan SQPSD02_01 enclosed to be followed.

DRAWING NO: 3-35-611-80440

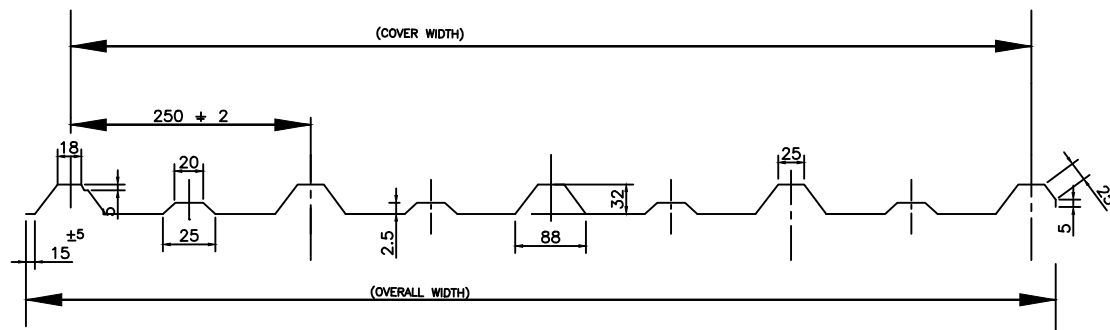
FOR TOLERANCES OF UNTOLERANCED DIMENSIONS DURING MANUFACTURE REFER RELEVANT Q.C.P\Q.P
MANUFACTURING AS PER RELEVANT Q.C.P\S.Q.P



TYPE-1

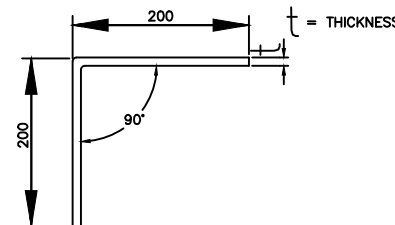
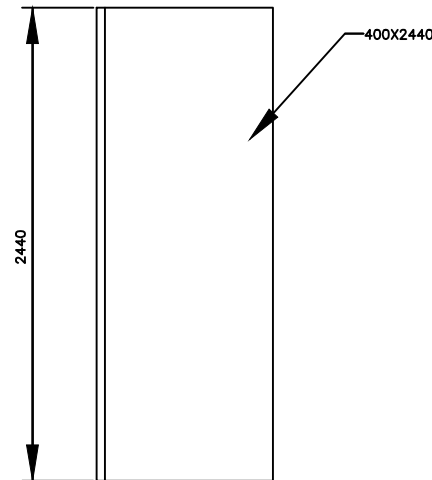


TYPE-2

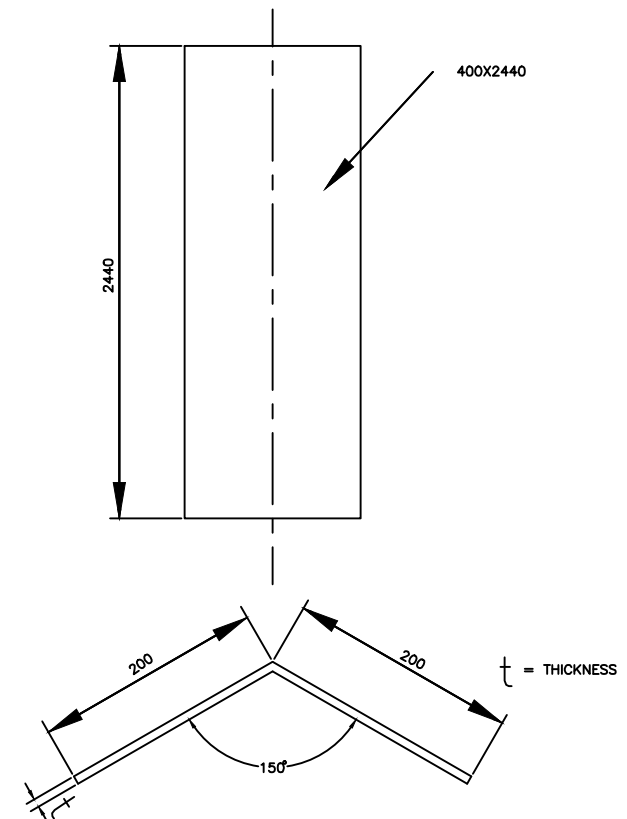


TYPE-3

TRAPEZOIDAL PROFILE SHEET



DETAILS OF BARGE BOARD CORNER PIECE



DETAILS OF RIDGE PIECE

ALL DIMENSIONS ARE IN MM

CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way detrimental to the interest of the company.

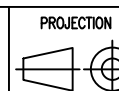
TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT



Bharat Heavy Electricals Ltd
UNIT: HIGH PRESSURE BOILER PLANT
TIRUCHIRAPALLI - 620014

DEPT
FBC & HRSG
CODE
1322

ALL DIMENSIONS
ARE IN MM



SCALE
N.T.S

WEIGHT (Kg)

REF TO ASSY / OLD DWG

DRN	NAME	SIGNATURE	DATE
CHD	V.MUTHUMANI		10.06.10
APPD	S.MURALI SANKAR		10.06.10
	V.RAMACHANDRAN		10.06.10

TITLE
DETAILS OF TRAPEZOIDAL PROFILE SHEET,
BARGE BOARD & RIDGE PIECE

DRAWING NO :
3-35-611-80440
REV
01

BHEL/TRICHY
MM/BOI/PURCHASE

REF:MM:PUR:BOI:ROOFSHEET

Pre-Qualification requirements (PQR) for the procurement of Roof sheets as per specification through Open Tender

Date :

Tender No & Date :

Supplier Name :

Supplier registered Address :

Supplier Plant Address :

A: Organizational Capability & Technical Competence:

Sl. No.	Pre –Qualification Criteria	Bidder acceptance / Bidder remarks
1.	Offers from bidders having basic in house manufacturing facilities for the enquired items are only eligible to participate. Offer from Traders, Distributors are not acceptable and will not be considered for evaluation. Vendor to indicate the nature of the Firm. (Trader/Distributor/Manufacturer). Product catalogue shall be submitted.	
2.	Compliance to Tendered Specification is mandatory for consideration of offer.	
3.	Compliance to Technical requirements & Quality Plan (if applicable) as per tendered specification against each item of enquiry.	
4.	Manufacturing plant address & available equipment's for manufacturing the tendered items shall be provided along with offer.	
5.	Suppliers shall submit Quality Management System certificate or Written down procedure.	
6.	Supplier shall have capacity to meet tender requirement.	
7.	Supplier offer will be considered subject to Customer Approval.	
8.	BHEL reserve the right to inspect the item ordered at any stage at vendor's works and if found not meeting the stipulated conditions, material is liable for rejection.	

B: Past Experience/ Performance:

Sl. No.	Pre –Qualification Criteria	Bidder acceptance / Bidder remarks
1.	Suppliers shall indicate their annual installed capacity for the tendered specification & it shall be more than the tendered quantity.	
2.	Suppliers shall have supplied similar items to the tendered Scope/Specification.	
3.	Suppliers shall submit Supply credentials for last 3 years successful supply of Roof Sheets (i.e. PPGI or PPGL) like unpriced PO copies with corresponding proof of supply (such as invoice/bill of lading copies and test certificates covering shall be submitted.)	
4.	Supplier shall have to submit contact details of the customers to whom successful supply completed.	

BHEL/TRICHY
MM/BOI/PURCHASE

REF:MM:PUR:BOI:ROOFSHEET

Pre-Qualification requirements (PQR) for the procurement of Roof sheets as per specification through Open Tender

C. Financial Soundness:

Sl. No.	Pre –Qualification Criteria	Bidder acceptance / Bidder remarks
1.	Indigenous suppliers shall submit copies of annual reports (balance sheets), profit & Loss Statement for the last three years (or from date of incorporation whichever is less) and GST Certificate.	

Necessary supporting documents shall be submitted for meeting each of the above Pre-Qualification Criteria for technical evaluation of the offers.

BHEL reserves the right to consider/Not-consider the offers based on the evaluation of documents submitted for the above Pre-Qualification Criteria. If required, BHEL also reserves the right to verify information submitted by vendor. In case the information is found false/incorrect, the offer shall be rejected. BHEL also reserves the right to carry out audit checks for confirming the material properties on the supplied material during material receipt at BHEL. Supplies found defective during check or subsequent processing at BHEL will be rejected.

PACKING METHOD

PACKING DETAILS FOR PRE COATED GALVANIZED ROOF SHEET, PRECOATED GALVALUME ROOF SHEET, RIDGE PIECE, CORNER BARGE BOARD AND PLAIN SHEETS

Packing material for Pre Coated Products:

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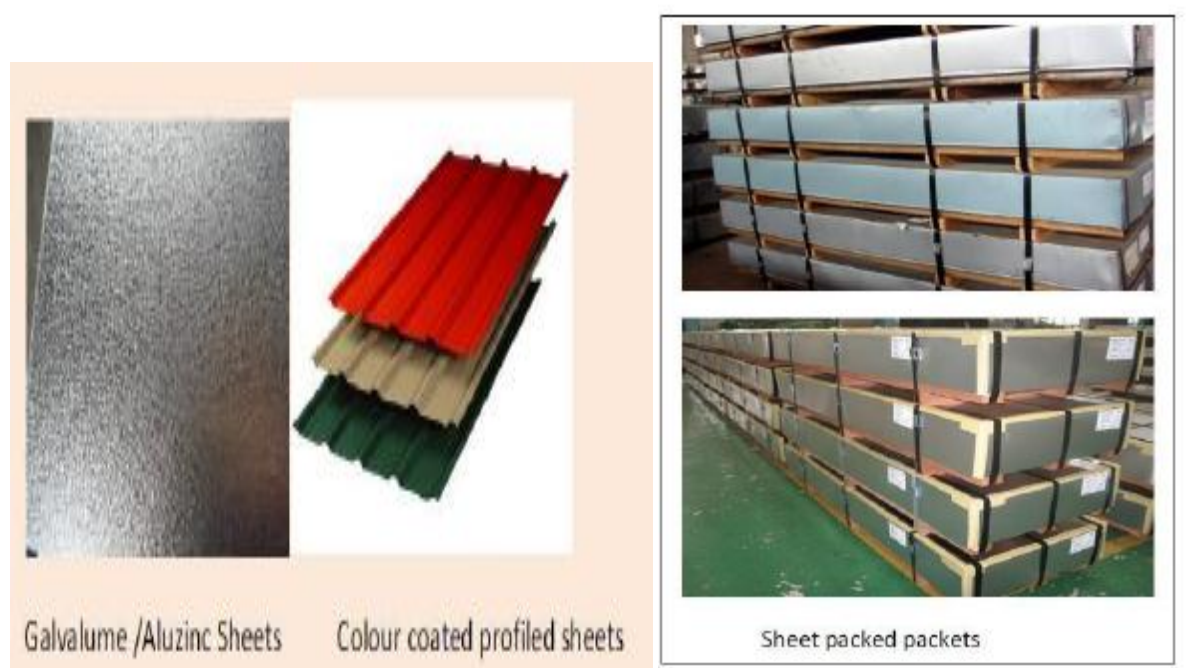
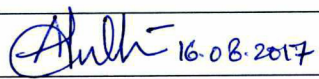


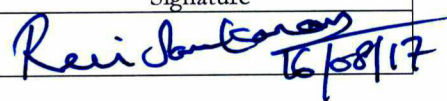
Figure-1

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	STANDARD QUALITY PLAN FOR PRE-PAINTED GALVANIZED STEEL SHEETS SQP:SD:02 Rev No: 01

Page: 1 of 3

Prepared By Quality Assurance	ABDUR RAHMAN SULTAN  16.08.2017
----------------------------------	---

Reviewed by	Signature
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3	TESTING ON PAINTED COILS/SHEETS – Tests shall be done at manufacturer's lab or NABL accredited labs.													
3.1	Bend Test	Peeling or crack of Paint	B	Visual	1 per 10 Tonnes	1 per 10 Tonnes	Cl 6.2 of IS 14246	Cl 6.2 of IS 14246*	IR	√	P	V	V	*No peeling or cracking of paint.
3.2	Pencil Hardness Test (2H)	Scratch proof	B	Visual	1 per 10 Tonnes	1 per 10 Tonnes	Cl 6.3 of IS 14246	Cl 6.3 of IS 14246#	IR	√	P	V	V	#No scratch
3.3	Impact Resistance Test	Impact resistance	B	Visual	1 per 10 Tonnes	1 per 10 Tonnes	Cl 6.4 of IS 14246	Cl 6.4 of IS 14246*	IR	√	P	V	V	*No peeling or cracking of paint.
3.4	Cross Hatch Test	No lifting of paint	B	Visual	1 per 10 Tonnes	1 per 10 Tonnes	Cl 6.5 of IS 14246	Cl 6.5 of IS 14246#	IR	√	P	V	V	#No lifting of paint.
3.5	Salt Spray Test	Corrosion Resistance/ Durability of paint	B	Visual & Measurement	1 per 10 Tonnes	1 per 10 Tonnes	Cl 6.6 & 5.4 of IS 14246 & BHEL Specn.	Cl 6.6 & 5.4 of IS 14246 & BHEL Specn.	MTC /IR	√	P	V	V	
4.0	FINAL INSPECTION													
4.1	Dimensional Inspection	Dimensions & Shapes	B	Visual & Measurement	100%	Min 1, max 10 *	BHEL PO & BHEL approved drawing		IR	√	P	W	V	*at random for each PO item.
4.2	Paint Inspection	Color, Shade & DFT	C		100%		BHEL PO	BHEL PO	IR	√	P	W	V	
4.3	Marking & Identification	PO no, Item, Material No, Project Name	B	Visual	100%		BHEL PO	BHEL PO	IR	√	P	W	V	
4.4	Packing along with Handling & Storage instructions to Sites@	Water-proof packing & Stability	B	Visual	100%		BHEL PO	BHEL PO	IR	√	P	W	-	@shall be available on each pack of sheets.

Notes:

- For Customer inspection, if applicable, the stages indicated under Column N shall be followed with specific approval of BHEL/Customer for Witness/Verification by Customer.
- The latest editions/revisions of the above mentioned/referred standards/procedures shall be used.

LEGEND: * RECORDS IDENTIFIED WITH "TICK" (√) SHALL BE ESSENTIALLY INCLUDED BY THE SUPPLIER IN QA DOCUMENTATION;
**** M:** MANUFACTURER (COIL/PROFILER), **C:** BHEL QC/BHEL AIA, **N:** CUSTOMER; **P:** PERFORM. **W:** WITNESS, **V:** VERIFICATION; **CLASS:** A - CRITICAL ; B - MAJOR ; C – MINOR;
MTC- Mill /Manufacturer's Test Certificate; IR- Inspection/Test Report; (R): Routine test; (I)/(Ts): Type test.

Handling and storage of coated steel products

Must be pasted on all packets clearly visible from outside

For longer life/durability after application, no wastage/damage of coated steel products below handling and storage guidelines are very important.

Handling

- 1) Use nylon/fiber felts for Handling. Do not use steel Wire rope/chains lifting /downloading / Moving
- 2) Use cushioning (wood /rubber) at bottom of & secure lashing & dunnaging **while** transportation.
- 3) Do not transport materials with water/chemicals/vegetables / animals/cement....
- 4) Unload carefully; avoid any packing damages due to unloading/handling.
- 5) If received wet & with damaged packing, Unpack, dry & repack.

Storage

- 1) Store materials on wooden support well over the flat & clean dry floor & temperature below 50°C.
- 2) Do not store materials on wet, damp, muddy floors /lands **directly**. If no option, use about 2 feet steel/ wooden platforms over such places for storing for only for few days.
- 3) Store in well ventilated, dry & protected from rain godowns/shades.
- 4) After Unpacking use materials within couple of days & balance materials remains if any, repack and store for further use.
- 5) Store away from chemicals / cement & any wet materials.

ITEM: PPGI. PLAIN SHEET: 0.60X1000X3000

"HEAVY DUTY CLASS" SPECIFICATION CONTINUOUSLY PREPAINTED GALVANISED STEEL SHEETS TO SPECIFICATION I.S: 14246 AS PER FOLLOWING REQUIREMENTS.

BASE METAL : Mild steel as per I.S:513

NOMINAL THICKNESS : 0.60mm (Without negative tolerance)

SIZE : 1000 mm X 3000 mm

GALVANISING : The base metal shall be galvanised with minimum Grade of Zinc coating 275gms/sq.m as per I.S:277

TOP SIDE PAINT : Top side coating shall be 20 microns minimum of Silicon Modified Polyester (SMP) painting. colour: BLUE (RAL 5012)

BOTTOM SIDE PAINT : Bottom side coating shall be 7 microns minimum of Silicon Modified Polyester (SMP) painting. colour: Grey (RAL 9002)

DURABILITY OF PAINT : As per Class – 3 of I.S:14246

Note:

- Packing, Handling and storage of the sheets shall be as per the enclosed Packing, handling and storage instructions.
- BHEL Standard Quality Plan SQPSD02_01 enclosed to be followed

BHEL/TRICHY
MM/BOI/PURCHASE

REF:MM:PUR:BOI:ROOFSHEET

Pre-Qualification requirements (PQR) for the procurement of Roof sheets as per specification through Open Tender

Date :

Tender No & Date :

Supplier Name :

Supplier registered Address :

Supplier Plant Address :

A: Organizational Capability & Technical Competence:

Sl. No.	Pre –Qualification Criteria	Bidder acceptance / Bidder remarks
1.	Offers from bidders having basic in house manufacturing facilities for the enquired items are only eligible to participate. Offer from Traders, Distributors are not acceptable and will not be considered for evaluation. Vendor to indicate the nature of the Firm. (Trader/Distributor/Manufacturer). Product catalogue shall be submitted.	
2.	Compliance to Tendered Specification is mandatory for consideration of offer.	
3.	Compliance to Technical requirements & Quality Plan (if applicable) as per tendered specification against each item of enquiry.	
4.	Manufacturing plant address & available equipment's for manufacturing the tendered items shall be provided along with offer.	
5.	Suppliers shall submit Quality Management System certificate or Written down procedure.	
6.	Supplier shall have capacity to meet tender requirement.	
7.	Supplier offer will be considered subject to Customer Approval.	
8.	BHEL reserve the right to inspect the item ordered at any stage at vendor's works and if found not meeting the stipulated conditions, material is liable for rejection.	

B: Past Experience/ Performance:

Sl. No.	Pre –Qualification Criteria	Bidder acceptance / Bidder remarks
1.	Suppliers shall indicate their annual installed capacity for the tendered specification & it shall be more than the tendered quantity.	
2.	Suppliers shall have supplied similar items to the tendered Scope/Specification.	
3.	Suppliers shall submit Supply credentials for last 3 years successful supply of Roof Sheets (i.e. PPGI or PPGL) like unpriced PO copies with corresponding proof of supply (such as invoice/bill of lading copies and test certificates covering shall be submitted.)	
4.	Supplier shall have to submit contact details of the customers to whom successful supply completed.	

BHEL/TRICHY
MM/BOI/PURCHASE

REF:MM:PUR:BOI:ROOFSHEET

Pre-Qualification requirements (PQR) for the procurement of Roof sheets as per specification through Open Tender

C. Financial Soundness:

Sl. No.	Pre –Qualification Criteria	Bidder acceptance / Bidder remarks
1.	Indigenous suppliers shall submit copies of annual reports (balance sheets), profit & Loss Statement for the last three years (or from date of incorporation whichever is less) and GST Certificate.	

Necessary supporting documents shall be submitted for meeting each of the above Pre-Qualification Criteria for technical evaluation of the offers.

BHEL reserves the right to consider/Not-consider the offers based on the evaluation of documents submitted for the above Pre-Qualification Criteria. If required, BHEL also reserves the right to verify information submitted by vendor. In case the information is found false/incorrect, the offer shall be rejected. BHEL also reserves the right to carry out audit checks for confirming the material properties on the supplied material during material receipt at BHEL. Supplies found defective during check or subsequent processing at BHEL will be rejected.

PACKING METHOD

PACKING DETAILS FOR PRE COATED GALVANIZED ROOF SHEET, PRECOATED GALVALUME ROOF SHEET, RIDGE PIECE, CORNER BARGE BOARD AND PLAIN SHEETS

Packing material for Pre Coated Products:

Sl No	Packing Materials(Layers)	Nos
1	LDPE	1
2	HDPE	1
3	Metal Box	1
4	Wooden pallet/Wooden Skid at bottom	Top metal box over bottom box as shown in figure-1
5	High tensile packing straps & tags	Along length 2, Along width every 1 m length + 2 tags.

SHEET PACKING:

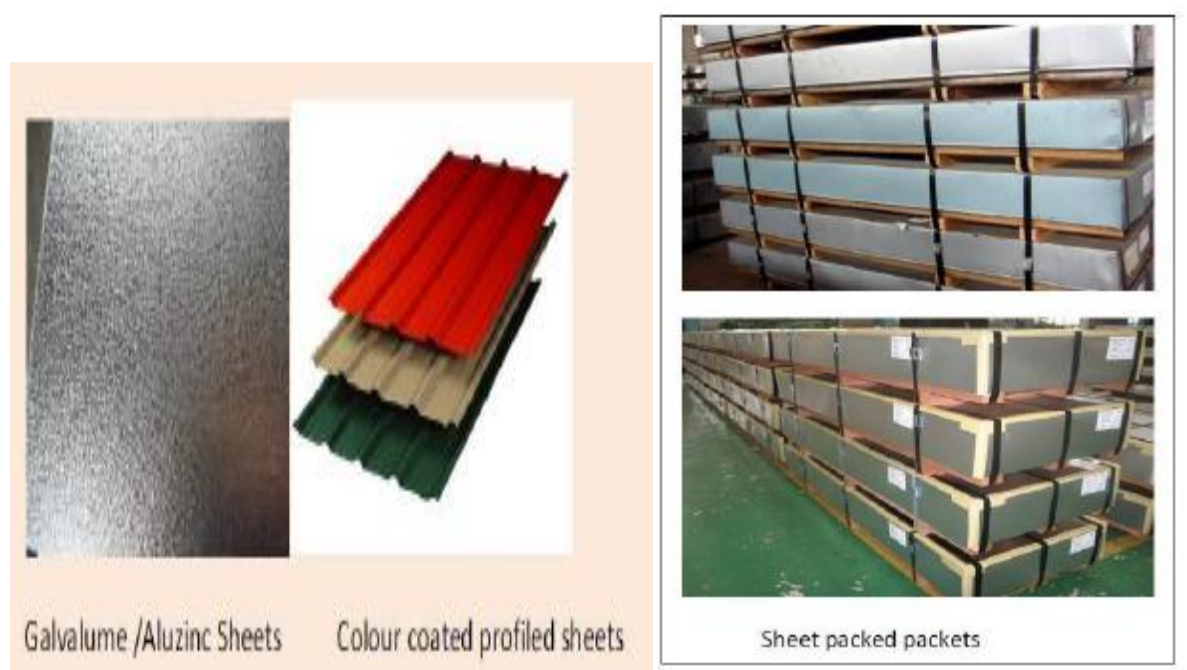
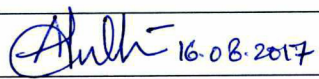


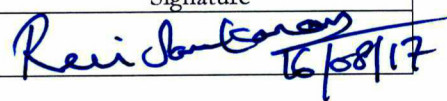
Figure-1

	BHARAT HEAVY ELECTRICALS LIMITED TIRUCHIRAPPALLI - 620 014, INDIA. QUALITY ASSURANCE DEPARTMENT
	STANDARD QUALITY PLAN FOR PRE-PAINTED GALVANIZED STEEL SHEETS SQP:SD:02 Rev No: 01

Page: 1 of 3

Prepared By Quality Assurance	ABDUR RAHMAN SULTAN  16.08.2017
----------------------------------	---

Reviewed by	Signature
Quality Assurance (G. PANNERSELVAM)	
Engineering (M - SHANMUGAM)	
Materials Management (M. RADHAKRISHNAN)	
Quality Control R. DHARMAR	

Rev No	Date	Approved by	Signature
01	16/08/2017	AGM / QA & BE	 16/08/17

Record of Revisions

Rev No	Details of Revision	Remarks
00	Fresh Issue	
01	Cl. 1.0 , 3.1 to 3.5 revised, 3.6 to 3.8 removed based on feedback from MM	Raw material sources removed, Quantum of testing revised.

बी एच ई एल 		MANUFACTURER'S NAME & ADDRESS: BHEL TIRUCHIRAPPALLI APPROVED SUPPLIERS		STANDARD QUALITY PLAN							QWI NO:SQP:SD:02			
				PRODUCT: PRE-PAINTED GALVANIZED STEEL SHEETS							REV NO: 01 DATE: 16/08/2017			
				SUB-SYSTEM :Steam Generator and Auxiliaries							PAGE: 2 OF 3			
SL. NO	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY			REMARKS	
					M	C/N				M	C	N		
1	2	3	4	5	M	C/N	7	8	9	D*	**	10	11	

1.0	RAW MATERIALS													
1.0	Steel Sheets/Coils	Chemical & Mechanical Properties (YS, TS, %Elong), Hardness, Cupping & bend tests	A	TC Verification	IS 513	IS 513	IS 513 & BHEL PO	IS 513 – Design CR1 Gr 390 & BHEL PO	MTC	√	P	V	V	
		Surface Finish	B	Visual	IS 513	IS 513	IS 513	Cl 8 of IS 513	MTC	√	P	V	-	
		Freedom from defects	B	Visual	IS 513	IS 513	IS 513	Cl 9 of IS 513	MTC	√	P	V	-	
		Dimensions	B	Measurement	IS 513	IS 513	IS 513	BHEL PO	MTC	√	P	V	-	
2.0	INPROCESS CONTROLS													
GALVANIZING														
2.1	Steel Sheets/Coils	Cleaning & Degreasing	A	Visual	100%	100%	IS 277 & BHEL PO	IS 277 & BHEL PO	Log	√	P	V	-	
2.2	Zinc Ingots*	Chemical properties	B	TC Verification	100%	100%	IS 209/ IS 13229	IS 209/ IS 13229	MTC	√	P	V	-	*Grade G250
2.3	Galvanization	Galvanizing	A	Visual	100%	100%	IS 277 & BHEL PO	IS 277 & BHEL PO	MTC	√	P	V	-	
2.4	Bend Test for zinc coating	Peeling of, flaking, cracking	B	Visual	Cl 8 of IS 277	Cl 8 of IS 277	Cl 8 of IS 277 & BHEL PO	Cl 8 of IS 277 & BHEL PO	IR	√	P	V	-	
2.5	Zinc Coating Test	Weight of coating of galvanizing*	B	Measurements	Cl 9 of IS 277	Cl 9 of IS 277	IS 277 & BHEL PO	IS 277 & BHEL PO	IR	√	P	V	-	*both sides inclusive: 275 gsm
2.6	Galvanized sheets/coils	Surface Finish	B	Visual	100%	100%	Cl 11 of IS 277	Cl 11 of IS 277	IR	√	P	V	-	
PAINTING & CORRUGATION														
2.7	Paint Coating Selection	Paint Class, viscosity, etc.	B	Visual	100%	100%	BHEL PO	BHEL PO	MTC	√	P	V	-	
2.8	Alkali Cleaning; Rinsing with Hot & cold water*;	Cleanliness of galvanized Sheets before painting	A	Visual	100%	100%	Manufacturer’s std	Freedom from oil, grease, dirt.	Log	√	P	V	-	* followed by Chromate soln treatment at room temperature
2.9	Painting: Primer on both sides; Top & bottom coats	Surface Preparation, Color Shade & DFT	B	Visual & Measurement	100%	100%	BHEL PO	BHEL PO	IR	√	P	V	-	
2.10	Corrugation of sheets *	Shape, Surface finish, peeling of paint on both sides	A	Visual	100%	100%	IS 277 & BHEL PO	IS 277 & BHEL PO	IR	√	P	V	-	*if applicable

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बी एच ई एल BHEL		MANUFACTURER'S NAME & ADDRESS: BHEL TIRUCHIRAPPALLI APPROVED SUPPLIERS		STANDARD QUALITY PLAN							QWI NO:SQP:SD:02			
				PRODUCT: PRE-PAINTED GALVANIZED STEEL SHEETS							REV NO: 01 DATE: 16/08/2017			
				SUB-SYSTEM :Steam Generator and Auxiliaries							PAGE: 3 OF 3			
SL. NO	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY			REMARKS	
					M	C/N	7	8	9	D*	M	C	N	
1	2	3	4	5	M	C/N	7	8	9	D*	**	10		11

2.11	Sheets	Dimensions of Corrugated/plane sheets	B	Measurements	100%	100%	BHEL PO & BHEL approved drawing	BHEL PO & BHEL approved drawing	IR	√	P	V	-	
3	TESTING ON PAINTED COILS/SHEETS – Tests shall be done at manufacturer's lab or NABL accredited labs.													
3.1	Bend Test	Peeling or crack of Paint	B	Visual	1 per 10 Tonnes	1 per 10 Tonnes	Cl 6.2 of IS 14246	Cl 6.2 of IS 14246*	IR	√	P	V	V	*No peeling or cracking of paint.
3.2	Pencil Hardness Test (2H)	Scratch proof	B	Visual	1 per 10 Tonnes	1 per 10 Tonnes	Cl 6.3 of IS 14246	Cl 6.3 of IS 14246#	IR	√	P	V	V	#No scratch
3.3	Impact Resistance Test	Impact resistance	B	Visual	1 per 10 Tonnes	1 per 10 Tonnes	Cl 6.4 of IS 14246	Cl 6.4 of IS 14246*	IR	√	P	V	V	*No peeling or cracking of paint.
3.4	Cross Hatch Test	No lifting of paint	B	Visual	1 per 10 Tonnes	1 per 10 Tonnes	Cl 6.5 of IS 14246	Cl 6.5 of IS 14246#	IR	√	P	V	V	#No lifting of paint.
3.5	Salt Spray Test	Corrosion Resistance/ Durability of paint	B	Visual & Measurement	1 per 10 Tonnes	1 per 10 Tonnes	Cl 6.6 & 5.4 of IS 14246 & BHEL Specn.	Cl 6.6 & 5.4 of IS 14246 & BHEL Specn.	MTC /IR	√	P	V	V	
4.0	FINAL INSPECTION													
4.1	Dimensional Inspection	Dimensions & Shapes	B	Visual & Measurement	100%	Min 1, max 10 *	BHEL PO & BHEL approved drawing		IR	√	P	W	V	*at random for each PO item.
4.2	Paint Inspection	Color, Shade & DFT	C		100%		BHEL PO	BHEL PO	IR	√	P	W	V	
4.3	Marking & Identification	PO no, Item, Material No, Project Name	B	Visual	100%		BHEL PO	BHEL PO	IR	√	P	W	V	
4.4	Packing along with Handling & Storage instructions to Sites@	Water-proof packing & Stability	B	Visual	100%		BHEL PO	BHEL PO	IR	√	P	W	-	@shall be available on each pack of sheets.

Notes:

- For Customer inspection, if applicable, the stages indicated under Column N shall be followed with specific approval of BHEL/Customer for Witness/Verification by Customer.
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Handling and storage of coated steel products

Must be pasted on all packets clearly visible from outside

For longer life/durability after application, no wastage/damage of coated steel products below handling and storage guidelines are very important.

Handling

- 1) Use nylon/fiber felts for Handling. Do not use steel Wire rope/chains lifting /downloading / Moving
- 2) Use cushioning (wood /rubber) at bottom of & secure lashing & dunnaging **while** transportation.
- 3) Do not transport materials with water/chemicals/vegetables / animals/cement....
- 4) Unload carefully; avoid any packing damages due to unloading/handling.
- 5) If received wet & with damaged packing, Unpack, dry & repack.

Storage

- 1) Store materials on wooden support well over the flat & clean dry floor & temperature below 50°C.
- 2) Do not store materials on wet, damp, muddy floors /lands **directly**. If no option, use about 2 feet steel/ wooden platforms over such places for storing for only for few days.
- 3) Store in well ventilated, dry & protected from rain godowns/shades.
- 4) After Unpacking use materials within couple of days & balance materials remains if any, repack and store for further use.
- 5) Store away from chemicals / cement & any wet materials.

Annexure – A- Additional Terms and Conditions for GeM Enquiry

The terms and condition mentioned in this document are applicable in addition to the GeM General Terms and Conditions. Bidders shall furnish pointwise confirmation/details.

Description of the Equipment:	Roof Sheets for Yadadri Project	
Projects	Yadadri 5x800MW project	
BHEL Tender No. & Date	BID NO:	
Name of the firm (Bidder)	:	
Address	:	
Contact details	<u>Contact person 1</u> Name: Designation: Office Phone: Mobile: e-mail: <u>Contact person 2</u> Name: Designation: Office Phone: Mobile: e-mail:	
<i>To be filled by bidder</i>		
Sl. No.	Terms and conditions	Vendor's confirmation
1 (a)	Technical: Bidder shall comply the specification requirements as per respective catalogues. Any clarifications/deviations to the specification requirements are to be clearly indicated. Hidden deviations indicated elsewhere in the offer will not be evaluated. Also the vendor shall submit the Profile Drawing. Quality Plan shall be as per our Standard SQP .	
1 (b)	Pre-qualification requirement: Offer shall be considered only if bidder is meeting Tender Prequalification requirement. Vendor to comply with Pre-Qualification requirement of the tender and submit along with their technical bid - the credentials and other documents as indicated in the PQR in the format prescribed. Otherwise their offer will get rejected.	
1 (c)	Vendor offers will considered for price bid opening subject to fulfilment of techno commercial suitability and vendor approval by end customer.	
1 (d)	Inspection by BHEL/ BHEL approved TPIA/Customer.	
2	Firm Price: The quoted / finalised rates shall be Firm till execution of the supplies. Offer with PVC clause will not be considered.	
3	Delivery term: The quote shall be on FOR/Yadadri Project Site as indicated below	

	inclusive of Packing, forwarding, Freight also to yours account. Transit Insurance is under BHEL scope.	
4	TENDER FINALIZATION: Tender will be finalized on total package basis through Reverse Auction in GeM	
5 (a)	Guarantee / Warranty Period: 24 months from the date of supply or 18 months from the date of actual put in use, whichever is earlier.	
5 (b)	Repair & replacements: Within the guarantee period vendor has to replace / rectify the defective/ damaged items on free of cost within a reasonable time of reporting from our end.	
5 (c)	Loading Criteria: Guarantee / Warranty Period: No Deviation is permitted. If still vendor offered any deviation on the Guarantee / warranty period, it may lead to rejection of offer.	
6 (a)	Kindly Indicate the HSN Code for all items	
6 (b)	Rate quoted in GeM portal should be on FOR destination basis inclusive of all taxes, freight etc. Transit Insurance is under BHEL scope. Please indicate the applicable GST %.	
7 (a)	Delivery Period: Delivery Period shall be 60 Days from the Manufacturing clearance. Material shall be dispatched after obtaining dispatch clearance from BHEL. Delivery period mentioned anywhere else in the bid document is for indicative purpose. Delivery schedule shall be strictly as per this clause.	
7 (b)	Document Submission: In case of PO placements, required documents have to be submitted for approval within 15 days from the date of PO & reply for any further clarification has to be within 7 days. Any delay beyond the above specified period will be considered during LD calculation.	
8	Invoice date/Bill of Lading date/Airway Bill date/Lorry way bill date/Railway Receipt date, whichever is later will be considered for LD calculation.	
9	Documents are to be submitted along with technical bid (Part-1) 01. Covering letter 02. Unpriced offer. 03. Duly Signed Technical documents as indicated in the tender without deviation. 04. Profile Drawing by the vendor in line with our Tender Requirement. 05. Filled BHEL Terms and condition sheet (Annexure-A) 06. Filled PQR along with supporting documents. 07. Self-Certification as per Make In India clause 08. MSE Certificates (if applicable) Note: All the pages of documents are to be signed and sealed by authorized signatory of the company. Any query during enquiry stage	

	shall be replied within three days failing which offer may be rejected as non-responsive.	
10	Inspection and testing requirements: Inspection and testing requirements are to be carried out as per BHEL Specification Requirement. Inspection notice period: For TPI inspector visit to vendor works, a minimum of 3 working days' notice period.	
11	O & M manuals: BHEL require 1 sets of printed O & M manuals with 3 soft copies in CD-ROM at no cost to be sent to BHEL/ Trichy.	
12	Supplier shall mention their GSTN registration number in all their invoices and invoices shall be in the format as specified/prescribed under GST laws. Invoices shall necessarily contain Invoice number (in case of multiple numbering system is being followed for billing like SAP invoice no, commercial invoice no etc., then the Invoice No which is linked/uploaded in GSTN network shall be clearly indicated), item description as per PO, Quantity, Rate, Value, applicable taxes with nomenclature (like IGST, SGST, CGST & UTGST) separately, HSN/ SAC Code, etc.	
13	All invoices shall bear the HSN Code for each item separately (Harmonized System of Nomenclature)/ SAC code (Services Accounting Code).	
14	Invoices will be processed only upon completion of statutory requirement and further subject to following: • Vendor declaring such invoice in Form GST ANX-1 • Receipt of Goods or Services and Tax invoice by BHEL	
14	As the continuous uploading of tax invoices in GSTN portal (in GST ANX-1) is available for all (i.e. both Small & Large) tax payers under proposed new GST Return System, all invoices raised on BHEL may be uploaded immediately in GST portal on despatch of material /rendering of services. The supplier shall ensure availability of Invoice in GST portal before submission of invoice to BHEL. Invoices will be admitted by BHEL only if the invoices are available in GSTN portal (in BHEL's GST ANX-2).	
16	In case of discrepancy in the data uploaded by the supplier in the GSTN portal or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit and will notify the supplier of the same. Supplier has to rectify the data discrepancy in the GSTN portal or issue credit note or debit note (details also to be uploaded in GSTN portal) for the shortages or rejections in the supplies or additional claims, within the calendar month informed by BHEL.	
17	In cases where invoice details have been uploaded by the vendor but failed to remit the GST amount to GST Department (Form PMT-08 or Form GST RET-01 to be submitted) within stipulated time, then GST paid on the invoices pertaining to the month for which GST return not filed by the vendor will be recovered from the vendor along with the applicable interest (currently 24% p.a) and all subsequent bills of the vendor will not be processed till filing of the GST return by the vendor	
18	In case GST credit is denied to BHEL due to non-receipt or delayed receipt of goods and/ or tax invoice or expiry of timeline prescribed in GST law for availing such ITC, or any other reasons not attributable to BHEL, GST amount claimed in the invoice shall be disallowed to the	

	vendor.	
19	Where any GST liability arising on BHEL under Reverse Charge (RCM), the vendor has to submit the invoices to BHEL well within the timeline prescribed in GST Law, to enable BHEL to discharge the GST liability. If there is a delay in submission of invoice by the vendor resulting in delayed payment of GST by BHEL along with Interest, then such Interest payable or paid shall be recovered from the vendor.	
20	Under GST regime, BHEL has to discharge GST liability on LD recovered from suppliers/contracts. Hence applicable GST shall also be recoverable from suppliers/contractors on LD amount. For this Tax Invoice will be issued by BHEL indicating the respective supply invoice number.	
21	GST TDS will be deducted as per Section 51 of CGST Act 2017 and in line with Notification 50/2018 – Central Tax dated 13.09.2018. GST TDS certificate which will be generated in GST portal subsequent to vendor accepting the TDS deduction in the GST portal, will be issued to the vendor.	
22	A declaration to the effect that all invoice particulars are/were uploaded in the GSTN network/ portal & all tax liability as per GST rules and regulations have been and will be discharged, shall be mentioned in the invoice. If not mentioned in the invoice, a separate declaration shall be submitted as per the requirement of BHEL	
23	MSE VENDOR: <i>Udyam Registration certificate shall be submitted by MSE vendors for availing the benefits.</i>	
24	<u>Make in India:</u> The local supplier at the time of tender, bidding or solicitation shall be required to provide self-certification that the item offered meets the minimum local content and shall give details of the location(s) at which the local value addition is made. Counter offering for Make in India will be on package basis (non-splittable)	
25	<u>Fraud Prevention Policy</u> Bidder along with its associate /collaborators /sub-contractors /sub-vendors / consultants / service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website http://www.bhel.com and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.	
26	<u>Packing Requirements:</u> Packing as per the attached Packing Methodology. Handling and storage of the sheets shall be as per the enclosed Handling and storage instructions and shall be available on each pack of sheets.	
27	<u>PRICE IMPACT:</u> All the technical / commercial details given in the enquiry shall be taken care and offer shall be quoted accordingly. No price impact / implication will be accepted within the validity period.	
Note	1. In the event of our customer order covering this tender being cancelled /placed on hold / otherwise modified, BHEL would be constrained to accordingly cancel / hold / modify the tender at any stage of execution.	

	2. BHEL may negotiate the L1 rate, if not meeting our budget / estimated cost. BHEL may re-float the tender opened, if L1 price is not acceptable to BHEL. 3. BHEL reserves its right to reject an offer due to unsatisfactory past performance by the respective Vendor in the execution of any contract to any BHEL project / Unit. 4. Any other Techno –Commercial Terms indicated by the vendor in their offer elsewhere will be ignored. BHEL will proceed with tender evaluation as per Annexure A only.
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Integrity Pact (IP)

(a) IP is a tool to ensure that activities and transactions between the Company and its Bidders / Contractors are handled in a fair, transparent and corruption free manner. Following Independent External Monitors (IEMs) on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.

SL	IEM	Email
1.	Shri Arun Chandra Verma, IPS (Retd.)	acverma1@gmail.com
2.	Shri Virendra Bahadur Singh, IPS (Retd.)	vbsinghips@gmail.com

(b) The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with techno-commercial bid (Part-I, in case of two/three part bid). Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification.

(c) Please refer Section-8 of IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to any of the above IEM(s). All correspondence with the IEMs shall be done through email only.

Note:

No routine correspondence shall be addressed to the IEM (phone/post/ email) regarding the clarifications, time extensions or any other administrative queries, etc. on the tender issued. All such clarification/ issues shall be addressed directly to the tender issuing (procurement) departments officials whose contact details are provided below.

Details of contact person(s): -

(1)

Name: R. Srija Mole

Deptt: MM/BOI

Address: 24 Building, BHEL, Trichy

Phone: 0431-2577872

Email: srija@bhel.in

(2)

Name: M. Patcha Raja Pandian

Deptt: MM/BOI

Address: 24 Building, BHEL, Trichy

Phone: 0431-2574750

Email: mpraja@bhel.in

INTEGRITY PACT

Between

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at "BHEL House", Siri Fort, New Delhi - 110049 (India) hereinafter referred to as "The Principal", which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

and

_____, (description of the party along with address), hereinafter referred to as "The Bidder/ Contractor" which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

Preamble

The Principal intends to award, under laid-down organizational procedures, contract/s for _____

_____. The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

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

Section 1- Commitments of the Principal

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

1.1.1 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.

1.1.2 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.

1.1.3 The Principal will exclude from the process all known prejudiced persons.

1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions:

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

- 2.1 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.
- 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or 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, immaterial or any 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.
- 2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or 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.
- 2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant Indian Penal Code (IPC) and Prevention of Corruption Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes 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.
- 2.1.4 Foreign Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives in India and Indian Bidder(s)/ Contractor(s) to disclose their foreign principals or associates. The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- 2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- 2.3 The Bidder(s)/ Contractor(s) shall not approach the Courts while representing the matters to IEMs and will await their decision in the matter.

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 acts in any other manner 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 separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

Section 4 - Compensation for Damages

- 4.1 If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent Earnest Money Deposit/ Bid Security.
- 4.2 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 equivalent to 5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee, whichever is higher.

Section 5 - Previous Transgression

- 5.1 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.
- 5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

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

- 6.1 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors. In case of sub-contracting, the Principal contractor shall be responsible for the adoption of IP by his sub-contractors and shall continue to remain responsible for any default by his sub-contractors.
- 6.2 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 Bidders/ Contractors /Subcontractors

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 Vigilance Office.

Section 8 - Independent External Monitor(s)

- 8.1 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.
- 8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the Principal including that provided by the Bidder(s)/ Contractor(s). The Bidder(s)/ Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-contractor(s). The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) / Sub-contractor(s) with confidentiality in line with Non- disclosure agreement.
- 8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract 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.

- 8.5 The role of IEMs is advisory, would not be legally binding and it is restricted to resolving issues raised by an intending bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some bidders. At the same time, it must be understood that IEMs are not consultants to the Management. Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization.
- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process, the matter should be examined by the full panel of IEMs jointly as far as possible, who would look into the records, conduct an investigation, and submit their joint recommendations to the Management.
- 8.7 The IEMs would examine all complaints received by them and give their recommendations/ views to CMD, BHEL, at the earliest. They may also send their report directly to the CVO and the Commission, in case of suspicion of serious irregularities requiring legal/ administrative action. IEMs will tender their advice on the complaints within 10 days as far as possible.
- 8.8 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.
- 8.9 IEM should examine the process integrity, they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the organization should be looked into by the CVO of the concerned organisation.
- 8.10 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Indian Penal Code/ Prevention of Corruption Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8.11 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.
- 8.12 The word 'Monitor' would include both singular and plural.

Section 9 - Pact Duration

- 9.1 This Pact shall be operative from the date IP is signed by both the parties till the final completion of contract for successful bidder and for all other bidders 6 months after the contract has been awarded. Issues like warranty / guarantee etc. should be outside the purview of IEMs.
- 9.2 If any claim is made/ lodged during currency of IP, 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 the CMD, BHEL.

Section 10 - Other Provisions

- 10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.

- 10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- 10.3 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- 10.4 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.
- 10.5 Only those bidders / contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.

For & On behalf of the Principal

(Office Seal)

SRIJA

Place-----

MOLE R

Date-----

Digitally signed
by SRIJA MOLE
R

Date:

2021.07.20

20:06:17 +05'30'

For & On behalf of the Bidder/

Contractor

(Office Seal)

Witness: **S B**

RAJESH

(Name & Address) **KUMMAR**

Digitally signed
by S B RAJESH
KUMMAR
Date:

2021.07.20

20:08:58 +05'30'

Witness:-----

(Name & Address)-----
