



Bharat Heavy Electricals Limited
(A Govt. of India Undertaking)

Piping Centre, 80, G. N. Chetty Road, CHENNAI – 600 017
Phone : 91 (044) 28161965, e-mail: poongkodi@bhel.in

REF: ENQ NO:4011900004

DT: 07.05.2019

Sub: **Request For Quotation (RFQ) for supply of IS 3589 pipes (Spiral Weld) for PATRATU Project site - reg.**

Ref: Enquiry No: 4011900004 dt 07.05.2019

BHEL/Piping Centre invites RFQ's for supply of CW pipes to spec IS3589 (Spiral Weld). The offers should be submitted in the E-procurement portal. The offer will be opened at **14.30 hrs** on the **due date 23.05.2019**. Late tenders are liable to be rejected. Please find the following documents enclosed for you to submit offer in two parts

1. Tender documents – Pre-Qualification Requirement (PQR) with all supporting documents and Techno Commercial Terms and Conditions (T&C)
2. Tech. delivery condition for pipes TDG: 07: 06 Dt. 04.05.2012
3. Pipe Drawings -3-80-477-35660-REV 00
4. Edge Preparation Drawing 3-80-300-19825 Rev 04 (Style D)
5. Painting scheme QP NO: 7381: QPC: 12 Rev. 00 dt. 21.08.2018
6. Unpriced bid Format
7. Integrity Pact
8. Price bid Format in e-procurement portal
9. Information on Reverse Auction
10. Cancellation / Termination of contract, Default / Breach of contract and Risk Purchase
11. Make in India Format
12. Checklist for CWP

Please indicate enquiry no and date and due date in all correspondences. This is only a request for quotation and not an order.

All supporting documents called for in PQR and T&C should be enclosed in Part-I of the tender.

Handwritten signature of Ms. Poongkodi
07/05/19

Ms. Poongkodi. V
Senior Engineer / Purchase
BHEL, Piping Centre

80, G.N.Road, T.Nagar, Chennai –600 017
Phone – 044-28161965. Email: poongkodi@bhel.in

For any clarifications on the Enquiry you may also contact
Ms. Priya Balaji / MPL, Purchase & Stores Co-ordination Phone –044-28161244
Email: pb@bhel.in



1.0 SCOPE

- 1.1 This Technical Delivery Conditions specify the requirements in addition to IS:3589 for electrically welded (ERW \ SAW) steel pipes.
- 1.2 The pipes are intended for water services (under Non-IBR Piping system only).
- 1.3 The pipes shall conform to the size, grade and quantity as specified in the purchase order.

2.0 MATERIAL

- 2.1 The plates / coils used for pipe shall meet the requirements as per IS: 3589 Grade Fe 410 MPa including mechanical test requirements.

3.0 DIMENSIONAL TOLERANCES

- 3.1 The tolerances limits are:
 - a) OD:- Upto NB 1600 mm: ± 4 mm; Above NB 1600 mm: ± 6 mm
 - b) Thickness:- Upto 14mm : $+1.3$ mm / -0.8 mm; Above 14 mm : $+1.4$ mm / $- 0.8$ mm.
 - c) Ovality (Difference between major and minor inside diameter): 0.5% maximum
 - d) Squareness of ends: The ends of pipe section shall not vary by more than 3mm at any point from a true plane perpendicular to the axis of the pipe and passing through the center of the pipe at the end.
 - e) Length and quantity tolerance as per P.O.
- 3.2 Other tolerances shall be as per IS: 3589

4.0 MANUFACTURING

- 4.1 The pipe shall be of longitudinally welded or spirally welded as indicated in the P.O.
- 4.2 The ends shall be edge prepared as indicated in the purchase order.
- 4.3 Circumferential seams shall be minimum 1500 mm apart from each other and from ends.
- 4.4 All pipes shall be completely finished and free from surface, sub surface defects such as pits, cracks, weld spatters & laminations etc..

5.0 NDE

- 5.1 For Pipe dia less than 1000mm:- 100 % Hydro test on each pipe + Radiography test for 100mm weld length at both the ends for 10% of the pipes.
- 5.2 For Pipe dia 1000 mm & above :-The NDT for each pipe shall be done by any one of the following options. The vendor shall indicate their choice in the offer.
 - a) 100 % Hydro test along with Radiography test for 100mm weld length on both the ends of each pipe.
 - b) 100 % Ultrasonic test + 10 % Radiography test on weld length (including all T-joints and 100mm weld length at both the ends) for each pipe.
 - c) 100 % Radiography test on weld length of each pipe.
- 5.3 The Ultrasonic test / Radiography test shall be carried out as per ASME Sec-V and shall be accepted as per ASME B31.1 Cl:136.4.6 / Cl:136.4.5.

6.0 INSPECTION

- 6.1 All pipes shall be inspected by the vendor prior to BHEL / Customers' Inspection. BHEL or BHEL authorized inspector / Customer will select the pipes at random and carryout the inspection. The necessary Material Despatch Clearance Certificate is to be obtained by the vendor prior to the despatch of material.

G.Venkataramani, Engg&Quality

Approved by

G.Panneer Selvam, QA

K. Ganesan, QPC&MPL



7.0 PAINTING AND PACKING

- 7.1 The pipes if dispatched to BHEL Stores shall be coated with resin type translucent rust preventive on the outside unless otherwise specified in the P.O. Pipes of diameter above NB 450 mm, shall be coated inside also.
- 7.2 The pipes if dispatched to project site directly shall be coated outside & inside as indicated in P.O.
- 7.3 In case of any special coating like PU, Glass Flake etc.. the vendor shall get BHEL approval for their QP and Procedure for application of coating.
- 7.4 Internal coating shall not be applied for 100mm length from each end to facilitate site joints.
- 7.5 Spiders are to be provided on both ends of the pipes as per the drawing indicated in the enquiry / Purchase Order.

8.0 MARKING

- 8.1 The pipes dispatched to **BHEL Stores** shall be **paint stencilled & hard punched** with the following details.
- 1) PO Number 2) Supplier's emblem/code 3) Size & Specification 4) Heat number
5) Pipe number 6) Inspector's seal
- 8.2 The pipes despatched directly to project site as **DTS**, the following details (furnished in the P.O. or separately) shall be **paint stencilled & hard punched** on both ends of the pipes in addition to the above.
- Work order No ➤ DU No ➤ Project name
➤ Quantity ➤ Weight
- 8.3 For the pipe dia 1000mm and above marking shall be done on internal surface in the uncoated area (i.e) within 100mm from pipe ends. The hard punching shall be done at one end and paint stencilling at other end. In case of pipes of dia less than 1000mm the marking shall be done on outside surface.

9.0 CERTIFICATES

- 9.1 Three original test certificates typed in English shall be submitted along with the inspection report.
- 9.2 The test certificate shall furnish the following details.
- BHEL P.O Number & Amendment Number(if any)
 - BHEL P.O. Serial Number
 - Test Certificate number.
 - Specification, grade, size, quantity
 - Heat number of plate (or pipe number with traceability to heat number)
 - Chemical composition and Mechanical properties
 - Hydrostatic test, UT, RT reports as applicable.
 - Dimensional report
 - Painting details

Records of Revn:06 :- i) Para 3.1, 5.1, 7.1, 8.1, 8.2 & 9.2 are revised
ii) Para 5.2, 5.3, 7.2, 7.3, 7.4 & 8.3 are added.

G.Venkataramani, Engg&Quality

Approved by

G.Panneer Selvam, QA

K.Ganeshan, OPC&MPL

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

FIRST ANGLE PROJECTION (ALL DIMENSIOINS ARE IN MILLIMETRES)

09993-224-08-3

DRAWING NO.

L

(SPECIFIC LENGTH)

SL. No.	DU NO.	PGMA	PIPE DESCRIPTION	QTY (in Meters)	SPECIFIC LENGTH	MATL. CODE	EDGE PREPARATION AS PER DRG NO. 3-80-300-19825	
						MATL. SPEC.	STYLE	Ø d1
01	001	80-477	PIPE OD813X8(UNDER GROUND PIPING)	6000 MR	10MR TO 14MR	15 938 582 0001 IS3589-410MPA	STYLE-D	797
02	018	80-477	PIPE OD813X8(OVER GROUND PIPING)	1450 MR	10MR TO 14MR	15 938 582 0001 IS3589-410MPA		

CUSTOMER NO. : 7384

NAME OF PROJECT :
3X800MW PATRATU SUPER THERMAL POWER PROJECT

NAME OF CUSTOMER :
M/S NTPC LIMITED

BHARAT HEAVY ELECTRICALS LTD.,
PIPING CENTRE, MADRAS

DRN

CHD

APPD

NAME

RP SINGH

KONDAPANAI DU

C SARVANAN

SIGN

DATE

04.05.19

04.05.19

04.05.19

NO OF ITEMS

DEPT.

CODE

TITLE

GRADE OF UN TOL DIM

C / M / F

PRODUCTION NOTES FOR
LP PIPING SYSTEM

N.T.S

SCALE

WEIGHT (Kg).

CARD CODE

DRAWING No.

REV

REV 02

DATE

ALTERED APPROVED

ZONE

REV 01

DATE 06.05.19

ALTERED RP SINGH
APPROVED KONDAPANAI DU

ZONE

SPEC LENGTH REVISED AS PER TENDER

ALL REVISIONS ARE INDICATED AS

- NOTES: -**
- 01 ALL PIPES ARE TO BE SUPPLIED WITH EDGE PREPARATION AS PER DRG NO. 3-80-300-19825. FOR EP STYLE & d1 VALUE (WELD END DIAMETER) REFER THE TABLE. INSIDE BEVEL IS REQUIRED, ONLY IF D1 VALUE IS HIGHER THAN INSIDE DIAMETER.
 - 02 TOLARANCE ON TOTAL LENGTH OF PIPE FOR EACH SERIAL NO IS ± 2 METERS .
 - 03 FOR SHOP PAINTING/COATING DETAILS , REFER CUSTOMER APPROVED PAINTING SCHEDULE & QUALITY PLAN FOR THE PROJECT.
 - 04 FOR PIPE DIAMETER > 1000mm , SPIDER ARRANGEMENT HAS TO BE PROVIDED AT THE ENDS AFTER EDGE PREPARATION , AS PER DRG. NO. 4-80-999-93078. FOR PIPE DIAMETER < 1000mm , SPIDER ARRANGEMENT IS NOT REQUIRED.

DRAWING NO. 3-80-300-19825	MATCHING EDGE PREPARATION FOR MISMATCH OD APPLICABLE FOR BENDS/FITTINGS OF P91/P92 MATERIALS
	NOTES: - 10. - APPLICABLE FOR P91/P92 A) STRAIGHT WITH STRAIGHT/FITTING

ADD ii) BEND WITH BEND/FITTING

04 02. FOR OD MISMATCH, REFER FIGURE-Xa

04 03.REFER STYLE-DLFOR THICKNESS <14.2mm (FOR ALL OD/ID)

04 04. REFER STYLE-PL

2.2.3. $\Delta_{0.05}$ WHEN THICKNESS ≥ 20 mm & OD < 219.1 mm.
 i) WHEN THICKNESS IS ≥ 14.2 mm & < 20 mm
 (FOR ALL OD/ID)
 ii) WHEN THICKNESS ≥ 20 mm & OD < 219.1 mm.
 $0.05 \cdot \alpha = 6^\circ$ FOR WALL THICKNESS ≥ 20 mm AND
 ≤ 30 mm
 $06 \cdot \alpha = 10^\circ$ FOR WALL THICKNESS > 30 mm

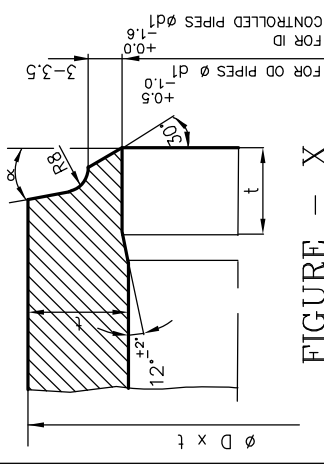


FIGURE - X

NOTES: -

01. APPLICABLE FOR P91/P92 ZERO ARM PIPEBEND WELDED WITH P91/P92 STRAIGHT PIPE

02. FOR OD MISMATCH, REFER FIGURE-Xa

03. REFER STYLE-D₁ FOR THICKNESS ≤14.2mm (FOR ALL OD/D)

04.REFER STYLE--PL

i) WHEN THICKNESS IS ≥ 14.2 mm AND < 20 mm FOR ALL OD/D.

ii) WHEN THICKNESS ≥ 20 mm AND OD < 219.1 mm.

05. $\alpha = 6^\circ$ FOR WALL THICKNESS ≥ 20 mm AND ≤ 30 mm

06. $\alpha = 10^\circ$ FOR WALL THICKNESS > 30 mm

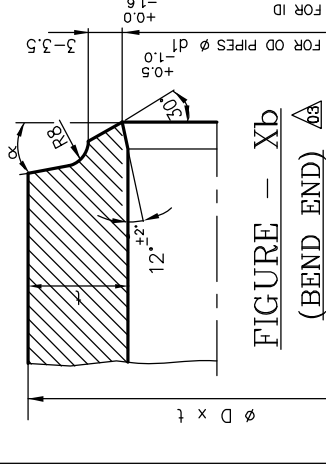


FIGURE - Xb
(BEND END) Δ₀₃

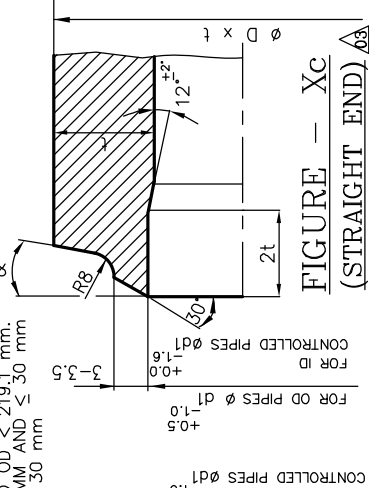


FIGURE - Xc
(STRAIGHT END) / 6

GENERAL NOTES :

01. THE MINIMUM THICKNESS AT WELD END SHALL NOT BE LESS THAN
 - a) 0.875 TIMES t NOM. FOR OO PIPES.
 - b) t MIN. FOR ID CONTROLLED PIPES.
02. t NOM & t MIN SHALL BE AS PER SPECIFIED PIPE SIZE.

03. SHARP CORNERS SHALL BE ROUNDED OFF WHEREEVER 'R'
NOTES FOR WELDING:

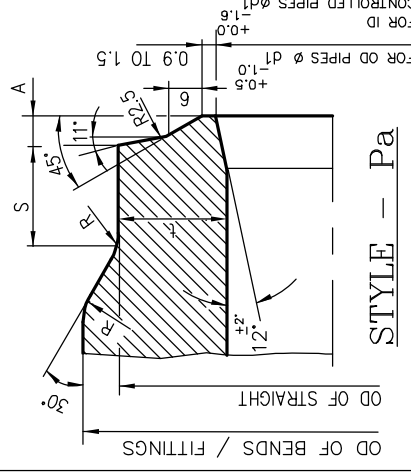
01. WELD REINFORCEMENT TO BE FLUSH GROUND AND MERGED WITH PARENT METAL WITHOUT ANY UNEVENNESS.

REV	DATE	ALTERED: R. SUNDH	
04	07.12.16	APPROVED: P. SESHAGIRI	
ZONE	SHEET 2 OF 2 IS ADDED. NOTES ADDED, MODIFIED AND DELETED IN FIGURE-X, 3a, 3b, 3c AND STYLE-P		
REV	DATE	ALTERED: M.R.K	
03	10.04.15	APPROVED: C.K.N	
ZONE	FIG.3C AND FIG.3d ADDED IN FIG.3X, NOTE 03 MODIFIED. IN FIG.3A3ST-P, 3A3C-P, 3A3E MATERIAL ADDED		
REV	DATE	ALTERED: M.R.K	
02	10.01.15	APPROVED: C.K.N	
ZONE	FIG.3a, 3b, 3c, 3d, 3e, 3f, 3g, 3h, 3i, 3j, 3k, 3l, 3m, 3n, 3o, 3p, 3q, 3r, 3s, 3t, 3u, 3v, 3w, 3x, 3y, 3z, 3aa, 3ab, 3ac, 3ad, 3ae, 3af, 3ag, 3ah, 3ai, 3aj, 3ak, 3al, 3am, 3an, 3ao, 3ap, 3aq, 3ar, 3as, 3at, 3au, 3av, 3aw, 3ax, 3ay, 3az, 3ba, 3bb, 3bc, 3bd, 3be, 3bf, 3bg, 3bh, 3bi, 3bj, 3bk, 3bl, 3bm, 3bn, 3bo, 3bp, 3bq, 3br, 3bs, 3bt, 3bu, 3bv, 3bw, 3bx, 3by, 3bz, 3ca, 3cb, 3cc, 3cd, 3ce, 3cf, 3cg, 3ch, 3ci, 3cj, 3ck, 3cl, 3cm, 3cn, 3co, 3cp, 3cq, 3cr, 3cs, 3ct, 3cu, 3cv, 3cw, 3cx, 3cy, 3cz, 3da, 3db, 3dc, 3dd, 3de, 3df, 3dg, 3dh, 3di, 3dj, 3dk, 3dl, 3dm, 3dn, 3do, 3dp, 3dq, 3dr, 3ds, 3dt, 3du, 3dv, 3dw, 3dx, 3dy, 3dz, 3ea, 3eb, 3ec, 3ed, 3ee, 3ef, 3eg, 3eh, 3ei, 3ej, 3ek, 3el, 3em, 3en, 3eo, 3ep, 3eq, 3er, 3es, 3et, 3eu, 3ev, 3ew, 3ex, 3ey, 3ez, 3fa, 3fb, 3fc, 3fd, 3fe, 3ff, 3fg, 3fh, 3fi, 3fj, 3fk, 3fl, 3fm, 3fn, 3fo, 3fp, 3fq, 3fr, 3fs, 3ft, 3fu, 3fv, 3fw, 3fx, 3fy, 3fz, 3ga, 3gb, 3gc, 3gd, 3ge, 3gf, 3gg, 3gh, 3gi, 3gj, 3gk, 3gl, 3gm, 3gn, 3go, 3gp, 3gq, 3gr, 3gs, 3gt, 3gu, 3gv, 3gw, 3gx, 3gy, 3gz, 3ha, 3hb, 3hc, 3hd, 3he, 3hf, 3hg, 3hi, 3hj, 3hk, 3hl, 3hm, 3hn, 3ho, 3hp, 3hq, 3hr, 3hs, 3ht, 3hu, 3hv, 3hw, 3hx, 3hy, 3hz, 3ia, 3ib, 3ic, 3id, 3ie, 3if, 3ig, 3ih, 3ii, 3ij, 3ik, 3il, 3im, 3in, 3io, 3ip, 3iq, 3ir, 3is, 3it, 3iu, 3iv, 3iw, 3ix, 3iy, 3iz, 3ja, 3jb, 3jc, 3jd, 3je, 3jf, 3jg, 3jh, 3ji, 3jj, 3jk, 3jl, 3jm, 3jn, 3jo, 3jp, 3jq, 3jr, 3js, 3jt, 3ju, 3jv, 3jw, 3jx, 3jy, 3jz, 3ka, 3kb, 3kc, 3kd, 3ke, 3kf, 3kg, 3kh, 3ki, 3kj, 3kl, 3km, 3kn, 3ko, 3kp, 3kq, 3kr, 3ks, 3kt, 3ku, 3kv, 3kw, 3kx, 3ky, 3kz, 3la, 3lb, 3lc, 3ld, 3le, 3lf, 3lg, 3lh, 3li, 3lj, 3lk, 3ll, 3lm, 3ln, 3lo, 3lp, 3lq, 3lr, 3ls, 3lt, 3lu, 3lv, 3lw, 3lx, 3ly, 3lz, 3ma, 3mb, 3mc, 3md, 3me, 3mf, 3mg, 3mh, 3mi, 3mj, 3mk, 3ml, 3mm, 3mn, 3mo, 3mp, 3mq, 3mr, 3ms, 3mt, 3mu, 3mv, 3mw, 3mx, 3my, 3mz, 3na, 3nb, 3nc, 3nd, 3ne, 3nf, 3ng, 3nh, 3ni, 3nj, 3nk, 3nl, 3nm, 3nn, 3no, 3np, 3nq, 3nr, 3ns, 3nt, 3nu, 3nv, 3nw, 3nx, 3ny, 3nz, 3oa, 3ob, 3oc, 3od, 3oe, 3of, 3og, 3oh, 3oi, 3oj, 3ok, 3ol, 3om, 3on, 3oo, 3op, 3oq, 3or, 3os, 3ot, 3ou, 3ov, 3ow, 3ox, 3oy, 3oz, 3pa, 3pb, 3pc, 3pd, 3pe, 3pf, 3pg, 3ph, 3pi, 3pj, 3pk, 3pl, 3pm, 3pn, 3po, 3pp, 3pq, 3pr, 3ps, 3pt, 3pu, 3pv, 3pw, 3px, 3py, 3pz, 3qa, 3qb, 3qc, 3qd, 3qe, 3qf, 3qg, 3qh, 3qi, 3qj, 3qk, 3ql, 3qm, 3qn, 3qo, 3qp, 3qq, 3qr, 3qs, 3qt, 3qu, 3qv, 3qw, 3qx, 3qy, 3qz, 3ra, 3rb, 3rc, 3rd, 3re, 3rf, 3rg, 3rh, 3ri, 3rj, 3rk, 3rl, 3rm, 3rn, 3ro, 3rp, 3rq, 3rr, 3rs, 3rt, 3ru, 3rv, 3rw, 3rx, 3ry, 3rz, 3sa, 3sb, 3sc, 3sd, 3se, 3sf, 3sg, 3sh, 3si, 3sj, 3sk, 3sl, 3sm, 3sn, 3so, 3sp, 3sq, 3sr, 3ss, 3st, 3su, 3sv, 3sw, 3sx, 3sy, 3sz, 3ta, 3tb, 3tc, 3td, 3te, 3tf, 3tg, 3th, 3ti, 3tj, 3tk, 3tl, 3tm, 3tn, 3to, 3tp, 3tq, 3tr, 3ts, 3tt, 3tu, 3tv, 3tw, 3tx, 3ty, 3tz, 3ua, 3ub, 3uc, 3ud, 3ue, 3uf, 3ug, 3uh, 3ui, 3uj, 3uk, 3ul, 3um, 3un, 3uo, 3up, 3uq, 3ur, 3us, 3ut, 3uu, 3uv, 3uw, 3ux, 3uy, 3uz, 3va, 3vb, 3vc, 3vd, 3ve, 3vf, 3vg, 3vh, 3vi, 3vj, 3vk, 3vl, 3vm, 3vn, 3vo, 3vp, 3vq, 3vr, 3vs, 3vt, 3vu, 3vv, 3vw, 3vx, 3vy, 3vz, 3wa, 3wb, 3wc, 3wd, 3we, 3wf, 3wg, 3wh, 3wi, 3wj, 3wk, 3wl, 3wm, 3wn, 3wo, 3wp, 3wq, 3wr, 3ws, 3wt, 3wu, 3wv, 3ww, 3wx, 3wy, 3wz, 3xa, 3xb, 3xc, 3xd, 3xe, 3xf, 3xg, 3xh, 3xi, 3xj, 3xk, 3xl, 3xm, 3xn, 3xo, 3xp, 3xq, 3xr, 3xs, 3xt, 3xu, 3xv, 3xw, 3xx, 3xy, 3xz, 3ya, 3yb, 3yc, 3yd, 3ye, 3yf, 3yg, 3yh, 3yi, 3yj, 3yk, 3yl, 3ym, 3yn, 3yo, 3yp, 3yq, 3yr, 3ys, 3yt, 3yu, 3yv, 3yw, 3yx, 3yy, 3yz, 3za, 3zb, 3zc, 3zd, 3ze, 3zf, 3zg, 3zh, 3zi, 3zj, 3zk, 3zl, 3zm, 3zn, 3zo, 3zp, 3zq, 3zr, 3zs, 3zt, 3zu, 3zv, 3zw, 3zx, 3zy, 3zz, 4a, 4b, 4c, 4d, 4e, 4f, 4g, 4h, 4i, 4j, 4k, 4l, 4m, 4n, 4o, 4p, 4q, 4r, 4s, 4t, 4u, 4v, 4w, 4x, 4y, 4z, 5a, 5b, 5c, 5d, 5e, 5f, 5g, 5h, 5i, 5j, 5k, 5l, 5m, 5n, 5o, 5p, 5q, 5r, 5s, 5t, 5u, 5v, 5w, 5x, 5y, 5z, 6a, 6b, 6c, 6d, 6e, 6f, 6g, 6h, 6i, 6j, 6k, 6l, 6m, 6n, 6o, 6p, 6q, 6r, 6s, 6t, 6u, 6v, 6w, 6x, 6y, 6z, 7a, 7b, 7c, 7d, 7e, 7f, 7g, 7h, 7i, 7j, 7k, 7l, 7m, 7n, 7o, 7p, 7q, 7r, 7s, 7t, 7u, 7v, 7w, 7x, 7y, 7z, 8a, 8b, 8c, 8d, 8e, 8f, 8g, 8h, 8i, 8j, 8k, 8l, 8m, 8n, 8o, 8p, 8q, 8r, 8s, 8t, 8u, 8v, 8w, 8x, 8y, 8z, 9a, 9b, 9c, 9d, 9e, 9f, 9g, 9h, 9i, 9j, 9k, 9l, 9m, 9n, 9o, 9p, 9q, 9r, 9s, 9t, 9u, 9v, 9w, 9x, 9y, 9z, 10a, 10b, 10c, 10d, 10e, 10f, 10g, 10h, 10i, 10j, 10k, 10l, 10m, 10n, 10o, 10p, 10q, 10r, 10s, 10t, 10u, 10v, 10w, 10x, 10y, 10z, 11a, 11b, 11c, 11d, 11e, 11f, 11g, 11h, 11i, 11j, 11k, 11l,		

MATCHING EDGE PREPARATION FOR MISMATCH OD
DIAMETRICALLY GREATER THAN 8 mm
(ie OD1 – OD2 > 8mm) APPLICABLE FOR
BENDS/FITTINGS OTHER THAN P91/P92 MATERIALS

NOTES: -

01. OD OF STRAIGHT TO BE PHYSICALLY MEASURED/VERIFIED.
02. WHEN t<65, S+A = 65 Min. & t>65, S=65 Min. WHERE t=THK OF CONN.PIPES(STRAIGHT).



STYLE – Pa

DIAMETRICALLY GREATER THAN 8 mm
(ie OD1 – OD2 > 8mm) APPLICABLE FOR
ELBOWS OTHER THAN P91/P92 MATERIALS

NOTES: -

01. OD = OUTSIDE DIA OF CONN. PIPE (STRAIGHT)

TO BE PHYSICALLY MEASURED / VERIFIED.

02. t = THK OF CONN. PIPE (STRAIGHT)

03. t = THK OF CONN. PIPE (STRAIGHT)

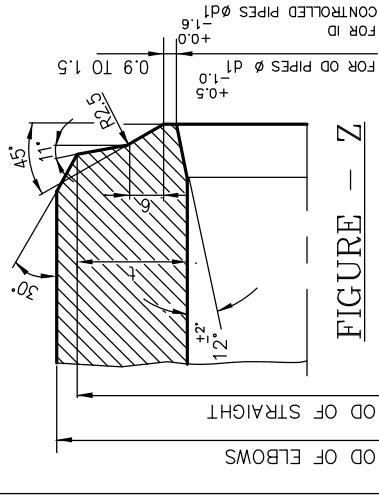
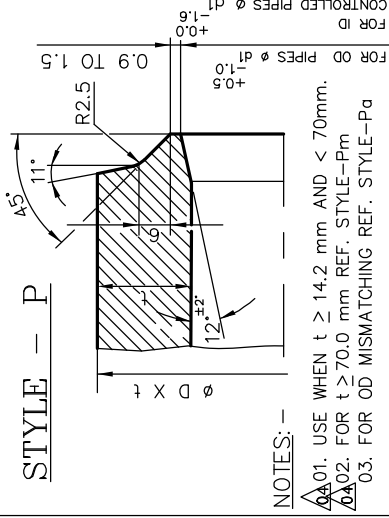


FIGURE - Z

NOTES: -

01. USE WHEN $t < 14.2$ mm.



STYLE – D

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT

STANDARD

		BHARAT HEAVY ELECTRICALS LTD., PIPING CENTRE, MADRAS		NAME K.B.RAGUNATH M.C.SEKARAN A.VELAYUTHAM	SIGN	DATE 11.10.01 11.10.01 11.10.01	NO OF ITEMS
DEPT.	GRADE OF UN TOL DIM C/M/F	SCALE 	WEIGHT (kg). —	NAME OF ORIGINAL ORGANISATION		ITEM No.	
TITLE EDGE PREPARATION DETAILS		CARD CODE U 01	DRAWING No. 3-80-300-19825		REV 04	SHEET 1 OF 2	

Part I - UnPriced bid (To be submitted with Technocommercial bid)

Enquiry ref **4011900004 dt 07.05.2019**

Vendor name M/s

S no	MATL CODE	DU No.	Pipe Desc.	UnderGround/ OverGround	Qty in metres	Weight in MT	Quoted / Not Quoted
10	159385370000	P7384180477001	PIPE 813 X 8 SPIRAL WELD IS3589-410MPA	Underground (UG)	6000	952.86	
20	159385370000	P7384180477018	PIPE 813 X 8 SPIRAL WELD IS3589-410MPA	Overground (OG)	1450	230.274	

Cells highlighted in orange color have to be filled by the vendors

UNDERGROUND PIPE (UG) - External Coating

SSPC – SP3 / Power Tool cleaning

Red Oxide Zinc Phosphate (Alkyd Base to IS 12744) - 1 x 30 Microns

OVERGROUND PIPE(OG) - External Coating

SSPC – SP3 / Power Tool cleaning

Red Oxide Zinc Phosphate (Alkyd Base to IS 12744) - 2 x 25 Microns

Synthetic enamel Long Oil Alkyd to IS 2932 – 2 x 35 Microns (Smoke grey shade no 692 of IS 5)

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
SUPPLY OF 133589 PIPES FOR PATRATU - 3 X 800 MW

_____. 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 IPC/ PC 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 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.

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 Bidder(s)/ Contractor(s) undertake(s) to obtain from all subcontractors a commitment consistent with this Integrity Pact and report Compliance to the Principal. This commitment shall be taken only from those sub-contractors whose contract value is more than 20 % of Bidder's/ Contractor's contract value with the Principal. The Bidder(s)/ Contractor(s) shall continue to remain responsible for any default by his Sub-contractor(s).
- 6.2 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors.
- 6.3 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 Bidders/ Contractors /Sub-contractors

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.
- 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 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 heal the situation, 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.
- 8.6 The Monitor will submit a written report to the CMD, BHEL, 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.
- 8.7 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.
- 8.8 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant IPC / PC 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.

8.9 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.

8.10 The word 'Monitor' would include both singular and plural.

Section 9 – Pact Duration

9.1 This Pact begins and shall be binding on and from the submission of bid(s) by bidder(s). It expires for the Contractor 12 months after the last payment under the respective contract and for all other Bidders 6 months after the contract has been awarded.

9.2 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 as above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 – Other Provisions

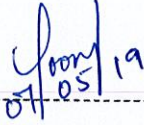
10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.

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.


07/05/19

For & On behalf of the Principal

पूंगोडी. वि / POONGKODI. V
वरिष्ठ अभियन्ता / Sr. Engineer / Purchase
बी एच ई एल, पाइपिंग सेन्टर / BHEL, Piping Centre
टी. नगर, चेन्नई / T. Nagar, Chennai

For & On behalf of the Bidder/ Contractor

(Office Seal)

Place---Chennai

Date---07.05.19

Witness:


अनिल श्री / ANIL SREE
वरिष्ठ अभियन्ता, क्रय / Sr. Engineer, Purchase
(Name & Address) बी एच ई एल, पाइपिंग सेन्टर / BHEL, Piping Centre
टी. नगर, चेन्नई / T. Nagar, Chennai

Witness: _____

(Name & Address) _____

INFORMATION ON REVERSE AUCTION

REVERSE AUCTION (AA: SSP: RA: 03) Issued on 26.09.2016

BHEL reserves the right to go for reverse auction (RA) (guidelines as Available on www.BHEL.com) instead of opening the sealed envelope price Bid, submitted by the bidder. This will be decided after Techno-commercial evaluation. Bidders to give their acceptance with the Offer for participation in RA. Non-acceptance to participate in RA may Result in non-consideration of their bids, in case BHEL decides to go For RA.

Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit 'process compliance form' (to The designated service provider) as well as 'online sealed bid' in the Reverse auction. Non-submission of 'process compliance form' or 'online Sealed bid' by the agreed bidder(s) will be considered as tampering of The tender process and will invite action by BHEL as per extant Guidelines for suspension of business dealings with suppliers/ Contractors (as available on www.BHEL.com).

The bidders have to necessarily submit online sealed bid less than or equal to their envelope sealed price bid already submitted to BHEL along With the offer. The envelope sealed price bid of successful L1 bidder in RA, if conducted, shall also be opened after RA and the order will be Placed on lower of the two bids (RA closing price & envelope sealed Price) thus obtained. The bidder having submitted this offer specifically agrees to this condition and undertakes to execute the Contract on thus awarded rates.

If it is found that L1 bidder has quoted higher in online sealed bid in Comparison to envelope sealed bid for any item(s), the bidder will be issued a warning letter to this effect. However, if the same bidder again defaults on this count in any subsequent tender in the unit, it Will be considered as fraud and will invite action by BHEL as per extant Guidelines for suspension of business dealings with suppliers/ Contractors (as available on www.BHEL.com)

Cancellation / Termination of contract, Default / Breach of contract and Risk Purchase

In case of abnormal delays (beyond the maximum late delivery period as per Penalty clause) in supplies / defective supplies or non-fulfilment of any other terms and conditions given in Purchase Order as enumerated subsequently in this clause, Purchaser shall be entitled to cancel the Order / Contract either in whole or portion thereof without compensation to Seller / Contractor and if the Purchaser so desires, may procure upon such terms and in such manner as deemed appropriate, stores not so delivered or others of similar description where stores exactly complying with particulars are not, in the opinion of the Purchaser, which shall be final, readily procurable, at the risk and cost of the Seller / Contractor and the Seller / Contractor shall be liable to the Purchaser for any excess costs provided that the Seller / Contractor shall continue the performance of the Order / Contract to the extent not cancelled under the provisions of this clause. The Seller / Contractor shall on no account be entitled to any gain on such repurchases. If bidder does not agree to the above Risk Purchase Clause, BHEL reserves the right to reject the offer.

Risk & Cost Clause, in line with Conditions of Contract may be invoked in any of the following cases:

- i. Contractor / supplier's poor progress of the work vis-à-vis execution timeline as stipulated in the Contract, backlog attributable to contractor/ supplier including unexecuted portion of work / supply does not appear to be executable within balance available period (#) considering its performance of execution.
- ii. Withdrawal from or abandonment of the work by contractor before completion of the work as per contract.
- iii. Non completion of work / Non-supply by the Contractor / supplier within scheduled completion / delivery period as per Contract or as extended from time to time, for the reasons attributable to the contractor / supplier.
- iv. Termination of Contract on account of any other reason (s) attributable to Contractor / Supplier.
- v. Assignment, transfer, subletting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
- vi. Non-compliance to any contractual condition or any other default attributable to Contractor / Supplier.

Risk and Cost amount against Balance Work:

$$\text{Risk \& Cost Amount} = [(A-B) + (A \times H/100)]$$

Where,

A= Value of Balance scope of Work / Supply (*) as per rates of new contract

B= Value of Balance scope of Work / Supply (*) as per rates of old contract being paid to the contractor / supplier at the time of termination of contract i.e. inclusive of PVC & ORC, if any.

H= Overhead Factor to be taken as 5

In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).

***(Balance scope of work / supply)**

Difference of Contract Quantities and Executed Quantities as on the date of issue of Letter for 'Termination of Contract', shall be taken as balance scope of Work / Supply for calculating risk & cost amount.

Contract quantities are the quantities as per original contract. If, Contract has been amended, quantities as per amended Contract shall be considered as Contract Quantities.

Items for which total quantities to be executed have exceeded the Contract Quantities based on drawings issued to contractor from time to time till issue of Termination letter, then for these items total Quantities as per issued drawings would be deemed to be contract quantities.

Substitute / extra items whose rates have already been approved would form part of contract quantities for this purpose. Substitute / extra items which have been executed but rates have not been approved, would also form part of contract quantities for this purpose and rates of such items shall be determined in line with contractual provisions.

Cancellation / Termination of contract, Default / Breach of contract and Risk Purchase

However, increase in quantities on account of additional scope in new tender shall not be considered for this purpose.

Note: In case portion of work is being withdrawn, contract quantities pertaining to portion of work withdrawn shall be considered as 'Balance scope of work / supply' for calculating Risk & Cost amount.

LD against delay in executed work / supply in case of Termination of Contract in case of Risk and Cost Option

LD against delay in executed work / supply shall be calculated in line with LD clause of the contract for the delay attributable to contractor / supplier. For limiting maximum LD value, contract value shall be taken as Executed Value of work / supply.

Method for calculation of "LD against delay in executed work / supply" is given below.

- i. Let the time period from scheduled date of start of work till termination of contract excluding the period of Hold (if any) not attributable to contractor / supplier= T1
- ii. Let the value of executed work / supply till the time of termination of contract= X
- iii. Let the Total Executable Value of work / supply for which inputs / fronts were made available to contractor / supplier and were planned for execution till termination of contract= Y
- iv. Delay in executed work / supply attributable to contractor/supplier i.e. $T2 = (1 - X/Y) * T1$
- v. LD shall be calculated in line with LD clause of the Contract for the delay attributable to contractor / supplier taking "X" as Contract Value and "T2" as delay attributable to contractor / supplier.

Note: In case portion of work / supply is withdrawn, no LD shall be applicable for portion of work / supply withdrawn.

Recovery from Supplier

Recoveries from contractor / supplier on whom risk & cost has been invoked shall be made from the following:

- i. Dues available in the form of Bills payable to contractor / supplier, SD, BG's against the same contract.
- ii. Dues payable to contractor / supplier against other contracts in the same Region / Unit / Division of BHEL.
- iii. Dues payable to contractor / supplier against other contracts in the different Region / Unit / division of BHEL.

Legal Options for recovery of dues payable by the supplier / contractor.

Declaration to be issued on Company letter head

In line with Government Public Procurement Order No. P-45021/2/2017-BE-II dt. 15.06.2017 & P-45021/2/2017-PP (BE-II) dated 28.05.2018, we hereby certify that we, _____ (supplier name) are local supplier meeting requirement of minimum local content (50%) defined in as above orders for the following Enquiry SI Nos of BHEL Enquiry No 4011900004 dt 07.05.2019.

- Enquiry SI Nos-

Details of location at which local value addition will be made is as follows:

.....
.....

By issuing this declaration, we understand and are in acceptance to the following-

- False declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.
- In case of debarment by any procuring entity for violation of the provisions of the Public Procurement (Preference to Make in India), Order 2017 we shall not be eligible for preference for procurement by any other procuring entity for the duration of the debarment. The debarment for such other procuring entities shall take effect prospectively from the date on which it comes to the notice of other procurement entities, the debarment takes effect prospectively from the date of uploading on the website(s) of The Department of Expenditure, GOI in such a manner that ongoing procurements are not disrupted.
- We undertake the onus of responsibility of submission of appropriately certified documents. We understand that BHEL is not at liability to verify the contents and will not be responsible for the declaration made by us. However, in case BHEL has any reason to doubt the authenticity of the local content, BHEL reserves the right to obtain the complete back up calculations before award of contract and we are liable to submit the same if requested by BHEL. We also understand that our bid is liable for rejection in case we fail to submit the details as requested by BHEL.

Seal and Signature of authorized signatory

Special Note-

In cases of procurement for a value in excess of Rs. 10 crores, the local supplier shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.

CHECKLIST FOR DOCUMENT SUBMISSION		
Patratu 3 x 800 MW		
S.No	Description of document - To be duly signed and filled wherever necessary	Document enclosed(Yes/No)
PART 1		
1	Techno Commercial Terms and Conditions (T&C)	
2	Pre-Qualification Requirement (PQR)	
	List of supporting documents for PQR	
	a) Company catalog/ Proof Certificate	
	b) Authorisation letter by manufacturer specific to this tender	
	c) List of manufacturing , testing and handling facilities	
	d) List of qualified personnel	
	e) Experience - PO copy / Supply completion certificate	
	g) Audited balance sheet for past three years	
	h) Copy of BIS certificate / Equivalent	
3	Tech. delivery condition for pipes TDG: 07: 06 Dt. 04.05.2012.	
4	Pipe shall be as per Drawing Nos. 3-80-468-35660-R01	
5	Pipe Edge Preparation as per Drawing No.3-80-300-19825 Rev 04 (Style D)	
6	Copy of ISO 9001 certificate	
7	Typical Quality plan already available (preferably customer approved)	
8	WPS - PQR	
9	Process Flow chart	
10	Painting scheme QP NO: 7381: QPC: 12 Rev. 00 dt. 21.08.2018	
11	UnPriced bid Format	
12	Cancellation / Termination of contract, Default / Breach of contract and Risk Purchase	
13	Integrity Pact	
14	Declaration for Make in India	
15	Checklist (To be filled and submitted with Technical bid without fail).	

VENDOR'S SIGNATURE