

Painting of Metallic Structure and pipeline at BPCL Uran LPG Terminal

INTRODUCTION

There is a Cryo CCPL line for transferring the Cryo LPG from Ship at JNPT liquid Cargo Jetty to Uran Terminal, which was commissioned in the year 2012. CCPL line is 12.5 Km long, above ground pipeline, which runs through the salt Pan area between JNPT and Uran Terminal. This pipeline is supported by pedestals and road over bridges (ROB) over road crossings and rail track crossings.

We also have structural supports for duct which carry pipelines and cables in plant cryogenic area and CCPL area. The metallic structures and Road over bridges in the area are weathered due to open exposure to heat and rain.

SCOPE OF WORK

The scope of work includes painting of **metallic structures, cross overs, pipelines etc.** and repainting pedestal numbers on all the pedestals carrying Cross Country Pipeline (CCPL) from JNPT Liquid Cargo Jetty to Uran LPG Terminal. The facilities to be painted are as mentioned below :

1. structural supports to the CCPL line on all the pedestals,
2. support to the expansion loops on CCPL line,
3. all the ROB structures carrying CCPL line over road and rail crossings and all other metallic structures,
4. pipelines and structures inside Uran LPG Terminal and JNPT Liquid Cargo Jetty as advised by the officer in charge,
5. Repainting of the pedestal numbers on all the pedestals.

We give below the tentative no. of bridges, expansion loops and pedestals.

Approx. No. of Road/Rail Over bridges --- 17 (Note the approx. length of each ROB can be obtained from the Engineering In Charge on specific demand)

Height of ROB structures from ground level – Varies between 6m to 10m

Approx. No. of Pedestals --- 1500

Approx. No. of Expansion Loops structures on CCPL which needs to be painted-- 10

The successful bidder has to carry out painting with following Painting System:-

LINE ITEM 10 -----PAINTING OF METALLIC STRUCTURES AND PIPELINE WORK

Surface Preparation:

Scrapping, the metal surface thoroughly with scraper, wire brush, and emery paper to expose the metal surface by properly cleaning and removing existing paints, scales, rust etc. **Power tool cleaning** may be used for surface cleaning at the places where it is feasible by taking care of safety of product pipeline passing nearby and as directed by officer in charge

Surface Preparation Power Tool Cleaning + Application of Self-Priming surface tolerant Epoxy Mastic Paint - 1 x 125 micron, High build two pack polyamide cured epoxy - 1 x 125 micron , Aliphatic acrylic modified high solids weather resistant recoatable two pack polyurethane(finish coat) -1x40 micron. Total DFT 290 micron including cost of metallic scaffolding & all safety precautions and PPE for working on height.

1) 1st Coat of Primer :

Applying Self-Priming surface tolerant Epoxy Mastic Paint (**Akzonobel, Berger, Nerolac or Asian**) of 125 Micron. Applying coat of primer shall be started after the Inspection of concerned officer. DFT for coat should be minimum of **125 microns**. If minimum DFT is not achieved then multiple time the coat should be applied to achieve the minimum recommended DFT. The painting can be done by using brush or roller. The vendor has to apply the paint on MS/GI/SS structures accordingly he has to consider the Paint to be used on structure.

2) Mid-Coat:

Applying 2nd coat by High build two pack polyamide cured epoxy (**Akzonobel, Berger, Nerolac or Asian**) of **125 micron**. The 2nd coat paint should be applied after 4 Hours of first coat of primer. (DFT for 2nd coat should be as specified above).The paint will be supplied by the vendor for the application purpose. The job included supply and applies. Application of 2nd coat shall be started after the Inspection of concerned officer only.

Note: First coat of Primer and second coat of primer should be of different shades for differentiation.

3) Final Coat of Paint:

Aliphatic acrylic modified high solids weather resistant recoatable two pack **polyurethane** (finish coat) - 1 x 40 micron. (**Akzonobel, Berger, Nerolac or Asian**) should be started after inspection and written permission by officer in paint register. The paint should be applied after 4 hours of Mid coat of paint and cleaning of surface. The paint will be supplied by the vendor for the application purpose. The job included supply and applies.

LINE ITEM 20-----CCPL SUPPORT PEDESTAL NUMBER REPAINTING

Painting as per standard colour scheme in letters/numbers of height =>225 mm (9 inch) size Over each pedestal, Surrounding to letters and numbers 1ft. * 1ft. Size border to be prepared. One coat cement primer and two coat enamel paint to be used for this line item. The place for painting of pedestal numbers will be decided and informed by the officer in charge. **(Painting of letters/numbers along with border on each pedestal, as specified above, will be considered as one job).**

TENDER NO :-- URN/T/19-20/77				
Painting of Metallic Structure & pipeline at BPCL Uran LPG				
Table for approx. dimensions of Road/Rail Overbridges (ROB)				
Sr. No	ROB number	Approx. span of ROB in mtr. (A)	Height (2 sides) in mtr. (6m x2 sides) (B)	Total run length in mtr. (A+B)
1	ROB 1	42	12	54
2	ROB 2	56	12	68
3	ROB 3	36	12	48
4	ROB 4	10	12	22
5	ROB 5	65	12	77
6	ROB 6	40	12	52
7	ROB 7	82	12	94
8	ROB 8	60	12	72
9	ROB 9	26	12	38
10	ROB 10	150	20	170
11	ROB 11	40	12	52
12	ROB 12	23	12	35
13	ROB 13	25	12	37
14	ROB 14	27	12	39
15	ROB 15	22	12	34
16	ROB 16	92	12	104
17	ROB 17	65	12	77
Note :- Pl. note that the above table is for reference pupose only. The actual size of the ROB may vary. Payment will be made based on the actual measurements duly certified by TPI.				

Following shall be considered as scope of work:

1. Vendor shall maintain the daily work log sheet in the format provided by the company. The same shall be signed by the officer in charge on daily basis. The
2. The required materials like paint, primer, thinner, wire brush, scrapper etc for painting job will be in the scope of contractor. The paint and primer shall be inspected by the officer in charge before the same is used. Vendor shall maintain all the records of material with manufacturing date and expiry date in the format provided by the company and get it signed by the officer in charge.
3. Vendor has to provide and use scaffolding for painting the bridges, structure, pipelines and equipment at height.
4. Since the ROBs are outside BPCL premises, any permission from local bodies, JNPT or railways is to be arranged by the vendor. BPCL will not be responsible for any delay due to pending permission from these authorities. However, if required, BPCL may help the vendor by providing any work permit or related documents.
5. The quantities mentioned in the tender are approximate. Payment will be made on the basis of actual work done. BPCL also reserves the right to award the job for partial quantity due to operational constraint. In such case BPCL will not pay any compensation, what so ever, for partial quantity.
6. Safety belt, Gloves and all required PPEs are to be provided by the contractor for all labours working under him.
7. Vendors are advised to visit the site before quoting the rates, in their own interest.
8. After getting the approval from the concerned officer, Contractor should go from one stage to next stage of subject jobs.
9. The successful Contractor should obtain the officer in-charge approval for color shade for the structure/ pipeline before starting the job.

The color shade of pipelines/ structure are as follows:

LPG Pipeline : Golden Yellow
Air pipeline : SKY Blue
Fire Water Line : Post Office Red
Structural : Black / gray
OR ANY OTHER COLOUR SPECIFIED BY BPCL