#244481

PETROLEUM & ENERGY INFRASTRUCTURE Ltd

T-155
Dome Roof Renovation

Billu Terminal
(Rev. P3)

P3	15/11/2020	For Bid	E.K	E.K	Efi kaganowski
P2	5/8/2020	For Bid	E.K	E.K	
P1	6/7/2020	Preliminary	E.K	E.K	
P^{O}	7/6/2020	Preliminary	E. Kaganowski	E. Kaganowski	
REV.	**DATE**	**DESCRIPTION**	**BY**	**CKD**	**APPROVED**

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Scope of Works:

This document covers the technical requirements for supply and applying of sealing materials to the renovation of T-155 geodetic aluminum dome roof at Billu Terminal.

Tank Data:

Tank diameter:	48.80.
Tank high:	19.50.
Tank roof:	Aluminum, Dom Roof.
Tank Content:	Jet Fuel.

Site Conditions:

1. Site altitude is about 70 m' above sea level.
2. Ambient temperature varies between 0^0C- 48^0C.
3. Relative humidity varies between 40% - 95%.
4. The site is close to a corrosive industrial area.
5. Rain fall around 500 mm' / year.

Technical Request:

Current Situation:
The tank is fitted with aluminum dome roof
Daily thermal expansion create gaps between the panels of the dome roof allows corrosive gas vapors escape from the tank and at the other hand allows water to enter the tank .

Attached are some drawings of the dome construction as well as photos of the dome roof panel connection.

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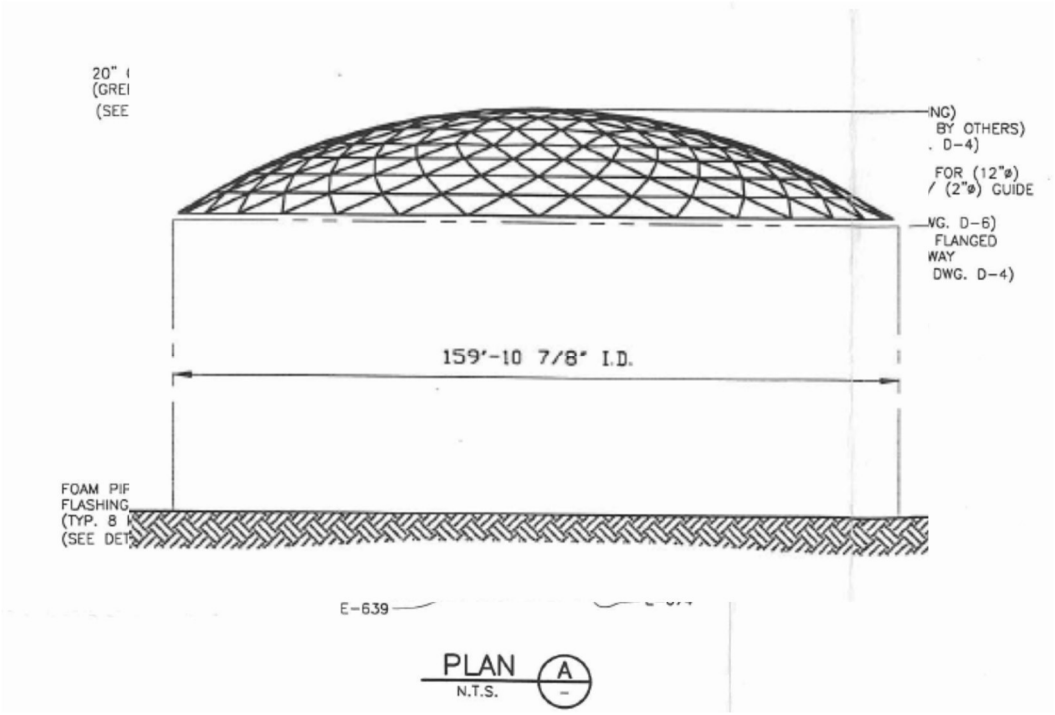

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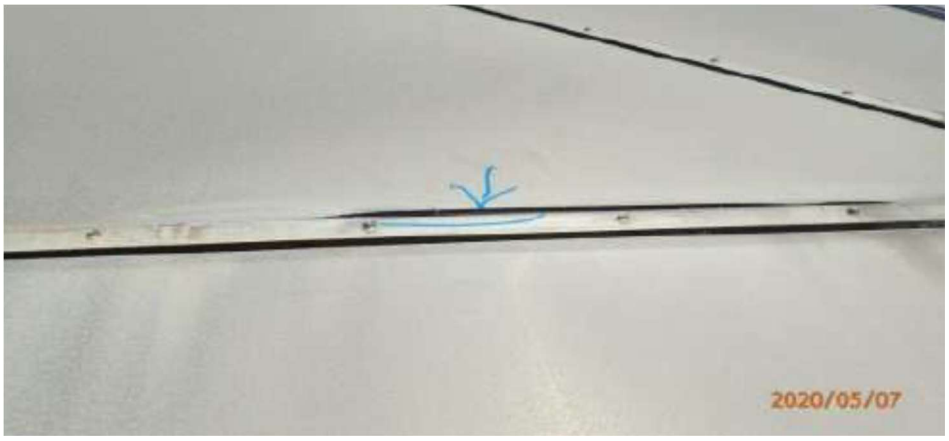

Required Solution:
The contractor shall offer solution to seal the tank roof panels by applies of flexible coating system.
The contractor shall supply and applied the sealing materials directly over the dome roof panel's gaps and connections

The sealing material shall be chemically resistant to fuels, sulfuric acid and leachate water and the vapors that they emit.
The material shall be UV protected as well as corrosion and abrasion resistance.
The system can be applying while the tank is in service.
The system has the advantage of adhering to most properly prepared surfaces.
The system allows a final coating thickness to be achieved in one up to two applications.

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The sealing system properties shall be such as describe:

- 100% solid
- No solvents and zero VOC.
- Exposure temperature: (-5) - 70°C.
- Abrasion resistance acc
  ASTM D4060 1000g 1000 cycles: H-18: ~ 150 mg loss
  CS-17: ~ 6 mg loss
  The contractor can quote a similar abrasion resistance test technic according to the purchaser approvals.
- High elongation for bridging cracks
  acc to EN 1062 B31: Passed.
- Capable of coating of all type of steel infrastructure.
- Re-coat over other polymer-based substrates and/or coatings.
- Attached are a typical physical property of the such material (the contractor will offer sealing materials with similar properties.:
  Tensile Strength: >25 Mpa.
  Elongation: >300%
  Hardness (Shore A) ~95
  Hardness (Shore D) ~50
  Tear Resistance:
  ASTM D624: 30 Mpa.

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Proven Experience:

The manufacturer shall quote a proven experience of applying the sealing system materials upon a metal tank to eliminate the entering of water throw the plates and evaporation of VOC.
Proven Experience shall be: one work during the last 5 years using the sealing materials for metal tank sealing project.

Manufacturer Requirements:

The sealing material manufacturer shall provide a supervision person for overseeing and assisting with the applying of the material.
The supervision person shall be well trained with the material applying,

General Terms:

The vendor shall supply the following information:
- Sealing material specification.
- Experience approvals.
  List of recommendation Customers including contact person and phone numbers or email address.
- Maintenance instruction.
- Execution period.

Guarantee:

The vender shall guarantee the material and works for a period of 36 months from the date the works as been accomplished.
In any case of faulty works and water penetrate the dome roof the contractor shall fix the water penetration immediately at no additional cost to the purchaser.

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