Marketing Training Report

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Contents

Chapter 1

Sanand Bottling Plant - Day 1

1.1 Glossary and Abbreviations

- OISD = Oil Industry and Safety Directorate
- TT= Tanker Trucks
- Cavitation =
- CFM= Cubic Feet per Minute
- SO= State Office
- HO= Head Office

1.2 Introduction to Sanand LPG Bottling Plant - Salient Points

- Due to low land prices and government push, this particular bottling plant has much more space than what is required under the OISD guidelines.
- In addition to that, there is a 66 acre buffer area which is not required anymore according to the latest OISD guidelines so, the plant "occupier" or location in charge Shri. Joydev Ojha, DGM(P) has decided to utilize it to benefit the corporation in the following ways:-
  - A 8MW solar plant was established in the buffer area which generates about Rs.3 lacs of electricity per day, part of which is used up by the factory and part is distributed to other IOCL facilities via the grid. It is important to note that according to the some regulations in the Gujrat solar power consumption policy, IOCL at max can only generate 50% of their net electricity demand if they wish to stay on grid and share their power with other IOCL facilities using the same. This facility covers 66 acre of the buffer area.
  - A 2 acre lube storage facility (CFA). It is important to note here that lube being a high flashpoint product is an "excluded product". Therefore, storing it in buffer areas donot raise any safety concerns.
  - 4 acres are being delegated to the pipelines division to facilitate the Kandla-Gorakhpur pipeline.
- Product is sourced into the bottling plant using approximately 100 LPG TTs of 18-20 MTs from the following sources -
  - Kandla port
  - Pipawa port
  - Varoda refinery
  - Reliance refinery, Jamanagar
  - Essar refinery, Jamnagar etc.
- There are 8 TLDs which takes about 3-4 hours to completely decant all the trucks and this happens in about 4 batches a day.
- Storage of LPG is done as follows:-
  - 3 Horton Spheres 1400 MT,1200 X 2 MT
  - 1 Stationary Vessel ie. Bullet 150 X 4 MT

  Therefore, net storage capacity = $1400+12X1200+150X4=4400MT$
- Decantation is done via pressure difference using a vapour compressor in the following steps:-
  - First vapour of TT is pressurized by taking vapour from vessel. This forces liquid LPG to move from TT to vessel.
  - Then, liquid valve is closed and then vapour is sucked from the tanker using vapour suction.

  This method is preferred over simply using pumps to pump the LPG from TT to vessel because if the pump pulls vapor by mistake, that will lead to cavitation.
- There are 3 carousels - 1400 cylinders/hour X 2 and 1600 cylinders per hour.
- The 3 carousels are fed by 3 pumps - 110 , 90, 36 X 2 CFM each with a max capacity of 6000 cylinders per month therefore, the net capacity would be approximately 18000 per month, but generally only about 15000 are required to be produced as per guidance from SO.
- The following requirement from SO side is generated by a computer model which takes the following factors into account -
  - Bulk receiving cost
  - Capacity of plant
  - Demand from market
  - Transportation cost from plant to market
- There are 2 types of valves in cylinders ie. Self Closing Valve (SC) 1.2and Liquid Off Take Valves (LOT) 1.1.
- Delivery within 24 hours to distributor.
- There are baffle plates in LPG TTs to arrest momentum of the fluid thereby causing less hindrance to the driver.

Figure 1.1: LOT Valve

1.3 FAQs

Figure 1.2: SC Valve