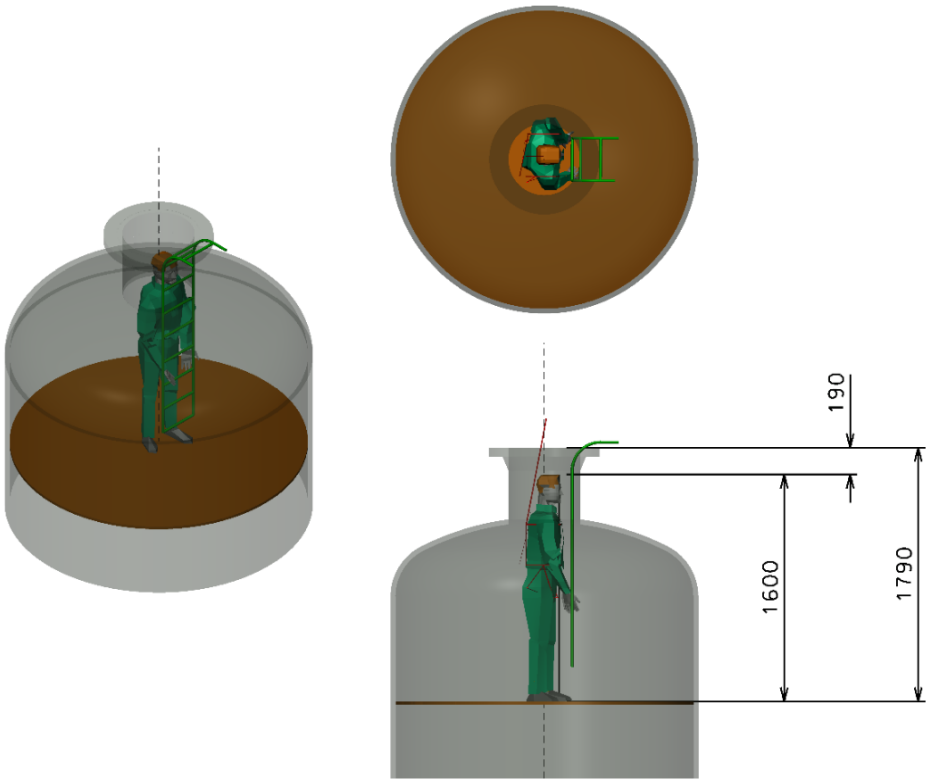
Incident Learning: What happened?

- Two Employees (Mechanical Fitter (MF) and Advance Process Controller (APC)) lost their lives during maintenance activities in the plant
- The task was removing a hold down grid inside the top section of the vessel, to allow for the unloading of catalyst.
- It is unclear of how the nitrogen got introduced in the vessel which created an inert vessel entry
- After finishing the task, MF prepared to go out of the vessel and at that moment MF was reported to have removed the mask and collapsed
- APC most probably tried to rescue MF and was also overcome by the flowing nitrogen
- Both employees were declared dead within the premises

Incident Learning: What happened?



Direct Root Cause

The investigation team concluded the root cause was the Failure of the Permit to Work and Confined Space Entry processes to prevent the vessel entry whilst the vessel was not appropriately spaded, and subsequently introduced nitrogen into the vessel, due to the lack of appreciation of the dangers associated within an oxygen deficient environment.

What are the learnings for implementation?

4.4 Causal Factor A “Unloading Procedure is inadequate”

4.5 Causal Factor B “Spading and nitrogen purging of the vessel deviated from existing procedure, and commenced without procedural revision and adequate assessment of risk”

4.6 Causal Factor C Failure to establish the risks associated with entering vessel for removal of hold down grating.

HSSE MOMENT SHARING ROSTER

REFINERY	RMSF MEETING
NATREF	**Q2 2017**
PETROSA	Q3 2017
ENREF	**Q4 2017**
CHEVREF	Q1 2018
SASOL	**Q2 2018**
SAPREF	Q3 2018

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