

Manway Removal Unit

Patent Pending

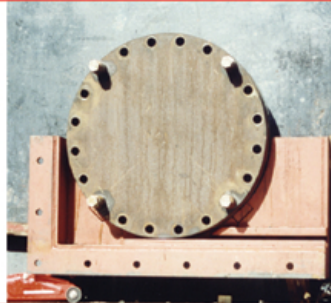
Introduction

The Manway removal unit is a brand new invention the MRU will allow a manway to be removed whilst the tank is live.

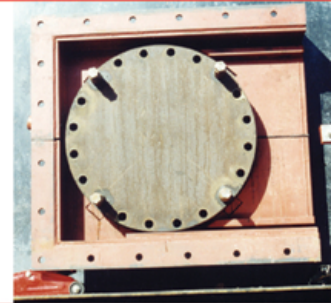
The MRU was invented to overcome the problem of crude oil sludge which had deposited on the tank floor and had risen to peaks of nearly four metres in height, resulting in the floating roof unable to land.

Traditional methods of crude oil sludge resuspension could not be utilised as the tank did not have any appropriate valves fitted, the roof leg design was as such that roof mixers would not be effective, and trepanning the manways so that live Mastir cannons could be fitted was considered to much of a risk. It was at this stage the idea for the MRU was born. The four pictures below show how easy the removal of the manway is utilising TFSL MRU.

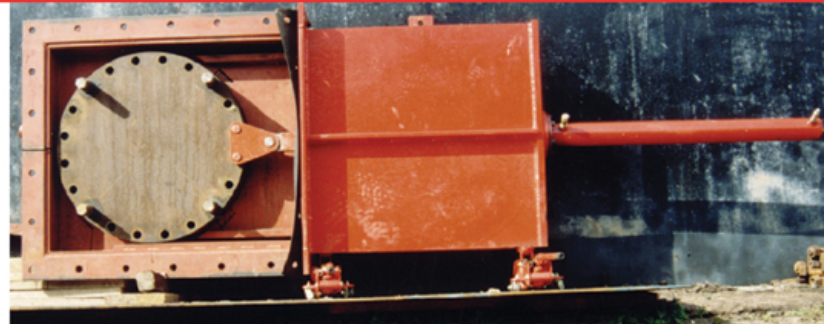
1
The manway bolts are removed and replaced with four high tensile nuts and bolts. Gaskets are inserted and the bottom saddle section is inserted under the manway



2
Gaskets are placed in position and the top saddle section is bolted into position.



3
Gaskets are placed in position and the side chamber is bolted into position. The hydraulic cylinder is extended and the retraction claw is inserted to two vacant bolt holes of the blank manway cover



4
Gaskets are placed into position and the front cover is bolted into position. To check the integrity of the MRU a hydraulic pressure test is carried out. Hydraulic jacks sited on the front cover are pressurised onto the blank flange. The four caps on the front cover are removed to allow the removal of the four retaining bolts holding the blank flange in place, the caps are then replaced.

The integrity of the MRU is retested and the pressure within the MRU is equalised to that of the tank. The blank flange is then removed into the side chamber.



For further information contact:

a Rutland Street, Ilkeston,
Derbyshire, DE7 8DG, UK
t +44(0)115 9443994

w tankfarmservices.co.uk
tankfarmservices.com
e tank.farm@btinternet.com



TankFarm
Services Limited