

Petroleum Development Oman LLC

MSE3

2017 Q2 LTI Incident Analysis Study

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1. Summary

PDO's LTIF target for this year is 0.22. The 2017 Q2 was (0.19) which was almost the same compared with (0.18) in the Q2 in 2016. PDO suffered 14 LTIs in this second quarter, 4 more than in 2016, but with more man-hours worked in Q2 2017. The following analysis of the incidents is designed to identify trends and points of statistical interest to target future resource.

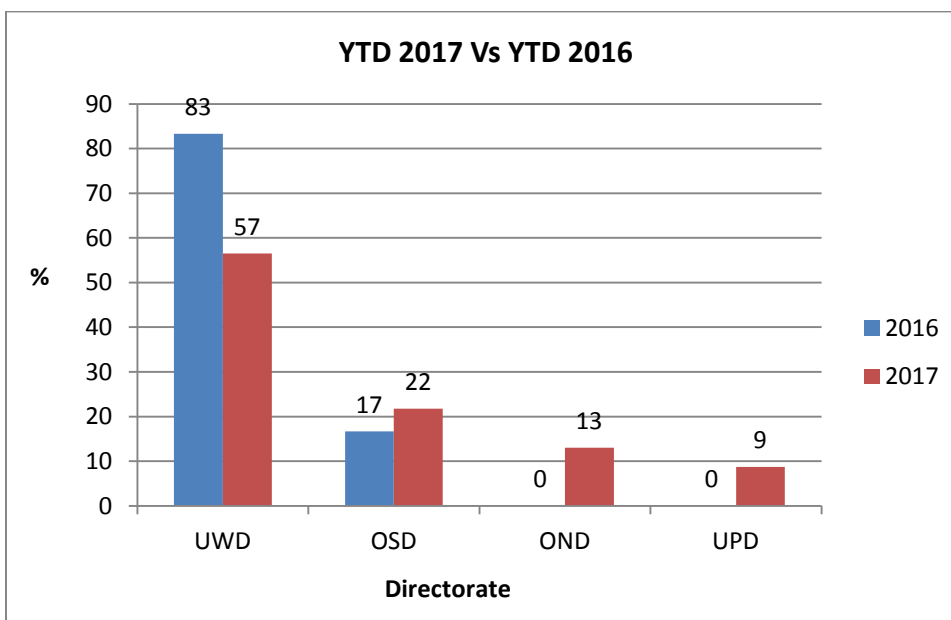
2. Analysis

2.1 Directorate Analysis

2.1.1 Directorate Breakdown

Directorate	Q2			YTD		
	2017	2016	% of change	2017	2016	% of change
UWD	7	6	+17	13	11	+18
OSD	4	2	+100	5	3	+67
OND	2	0	+200	3	0	+300
CPDM	0	2	-200	0	2	-200
UPD	1	0	+100	2	0	+200
Total	14	10	+40	23	16	+44

2.1.2 PDO % LTI Profile by Directorate – YTD 2017/YTD 2016



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2.2 LTIs per Operational Teams YTD:

UWD	9-UWO, 3-UWN, 1-UWB
OSD	1-OSO, 2- OSE, 2- OSC
OND	3-ONE
UPD	2-UPR

2.3 PDO v Contractor YTD:

19	PDO contractors
4	PDO employee

2.4 Contractor information YTD:

There are 13 contractors who suffered LTI incident YTD in addition to PDO.

The breakdown is as follows:

No of LTIs Committed	Company
4 incidents	PDO Insourcing
2 incidents	Dalma Energy, Galfar, Medco, Petrogas, Shaleem, VAPS
1 incidents	Abraj, ATE, Halliburton, Midwesco, NDSC, Sea & Land, STST

2.5 LTI Incidents Descriptions YTD:

Trapped between the BOP table and BOP screws resulting in fractured finger.
Tripped and fall from the back of the truck resulting in fractured wrist.
Struck by a pipe which was being pulled out of sand dune resulting in fractured leg.
Struck by a falling piece of metal weighing 24 kg resulting in fractured foot.
Motor Vehicle Incident (MVI) resulting in back injury.
Struck by a pipe which was driven over by a tanker resulting in fractured foot.
Struck by the trailer's side panel while opening resulting in fractured femur.
Struck by the steering wheel of the trailer resulting in fractured finger.
Struck by a 6" pipe while fixing it resulting in fractured leg.
Struck by a testing bottle in the lab resulting in fractured wrist.
Tripped while crossing a pipe resulting in fractured foot.
Crushed by the traveling block resulting in fractured hand.
Trapped between the joint and the elevator resulting in fractured finger.
Struck by a water hose while laying it resulting in fractured arm.
Struck by a 6" line against cutting box resulting in amputated finger tip.

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Slipped from a crane ladder resulting in fractured wrist and neck.
Crushed between the Kelly and the Motor resulting in fractured hand.
MVI resulting in fractured collar bone.
Trapped in the chapatti machine resulting in amputated thumb and finger.
Trapped in between the polish rod and the stud resulting in fractured finger.
Fall while attempting to descend the monkey board resulting in fractured ankle.
Struck by a cylinder while carrying in upstairs resulting in fractured finger.
Struck by hoist unit while rigging down resulting in fractured leg.

2.6 Incident classification YTD:

Type of Incident causing LTI	No of LTIs YTD 2017	No of LTIs YTD 2016	% change from 2016
Crush/Trapped	10	4	+150
Slip, Trip, Fall	6	3	+100
Fall from height	0	3	-300
Struck by object	5	5	0
MVI	2	1	+100
Total	23	16	+44

2.7 Actual Severity YTD:

Severity Level	YTD 2017	YTD 2016
a. Severity 2 (minor injury)	0	0
b. Severity 3 (major injury)	23	15
c. Severity 4 (fatality)	0	1

2.8 Potential Severity YTD:

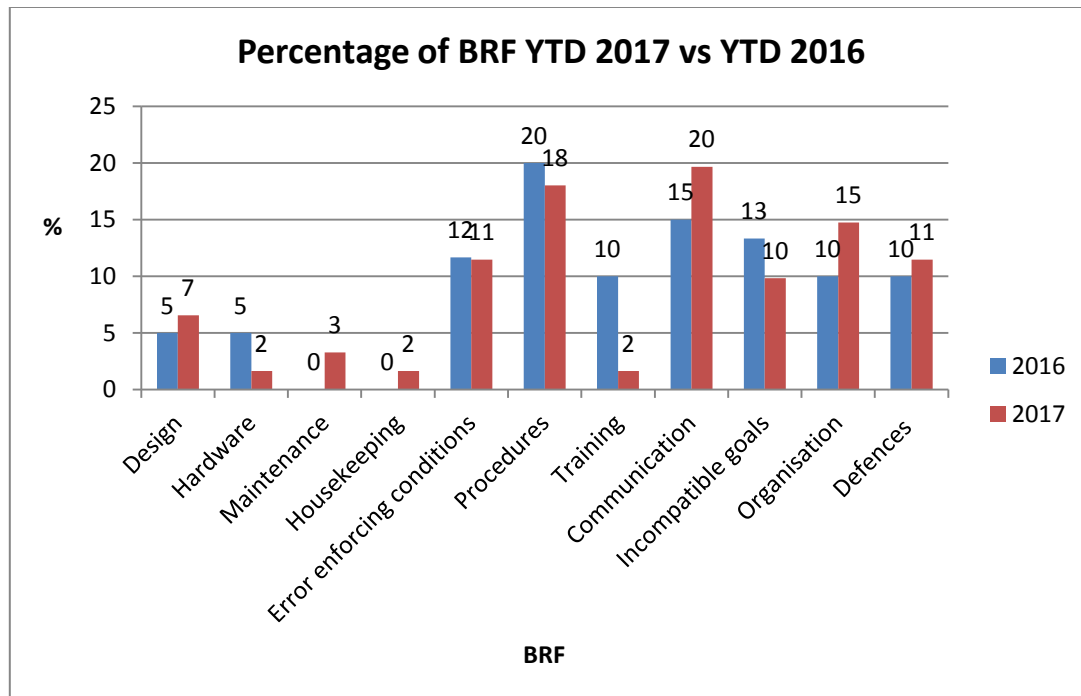
	YTD 2017	YTD 2016
B3 Major injury, heard of in the industry	0	1
C3 Major injury, has happened in the company	19	14
C4 Fatal injury, has happened in the company	1	1
D3 Major injury, has happened more than once a year in the company	2	0
D4 PTD or up to 3 fatality, has happened more than once in the industry	1	0

2.9 BASIC RISK FACTORS (BRF's) YTD:

2.9.1 Comparison table of the BRF YTD 201 – YTD 2016:

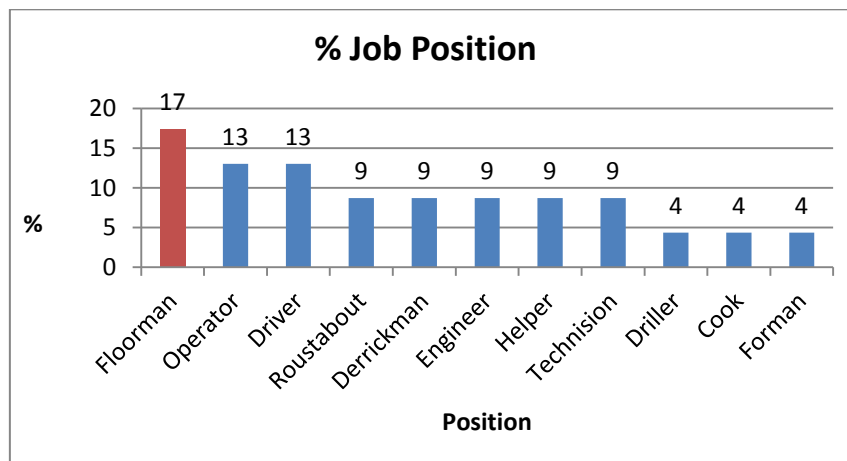
BRF	YTD 2017	YTD 2016
Design	4	3
Hardware	1	3
Maintenance	2	0
Housekeeping	1	0
Error enforcing conditions	7	7
Procedures	11	12
Training	1	6
Communication	12	9
Incompatible goals	6	8
Organisation	9	6
Defences	7	6

2.9.2 Comparison graph of the BRF:



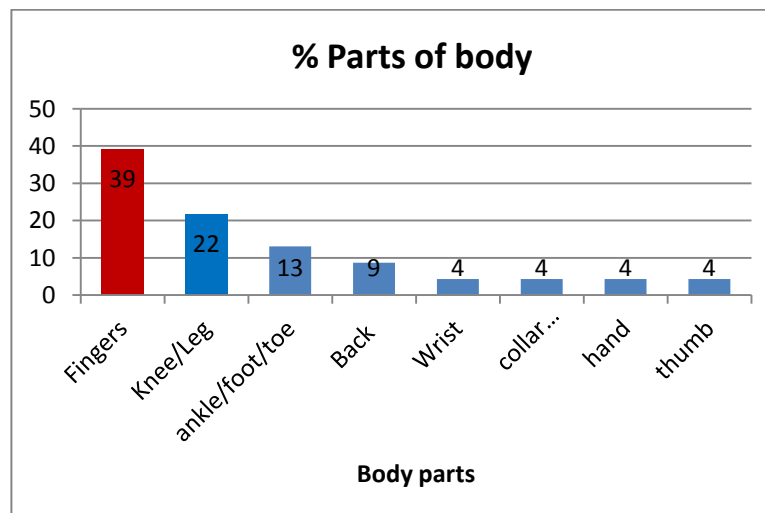
2.10 Job positions YTD:

Floorman	4
Operator	3
Driver	3
Roustabout	2
Derrickman	2
Engineer	2
Helper	2
Technician	2
Driller	1
Cook	1
Forman	1



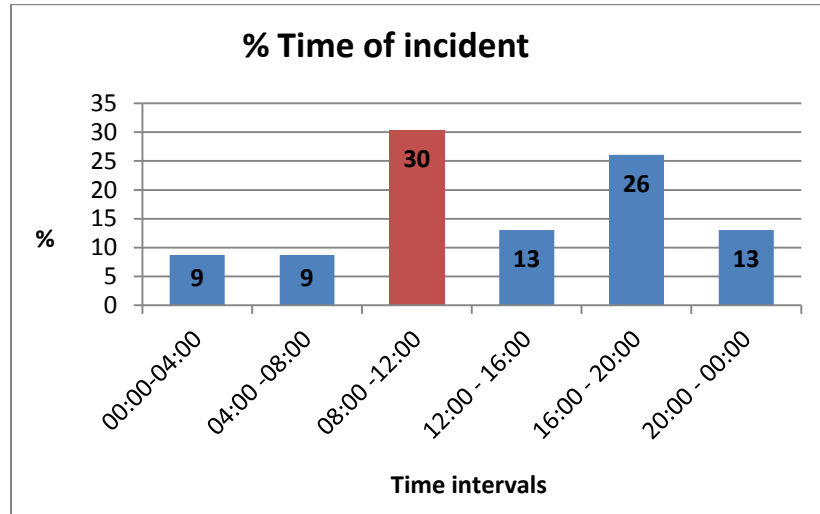
2.11 Parts of body injured YTD:

Fingers	9
Knee/Leg	5
ankle/foot/toe	3
Back	2
Wrist	1
collar bone/shoulder	1
hand	1
thumb	1



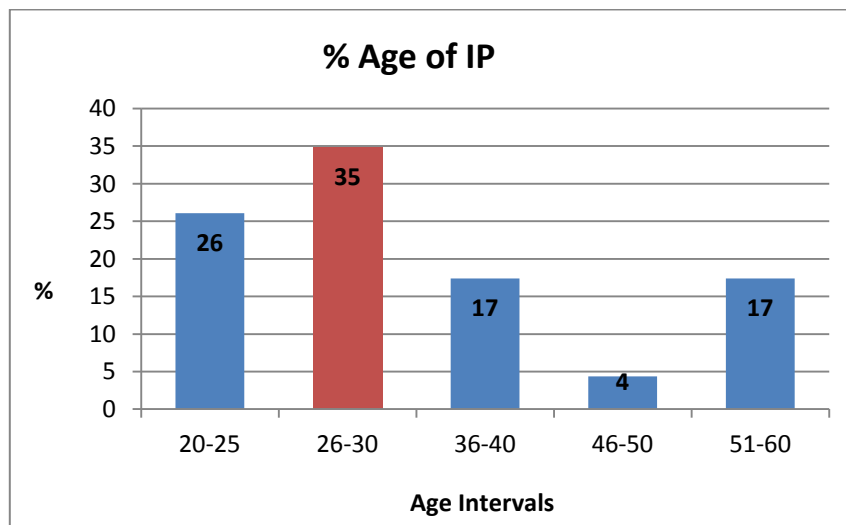
2.12 Time of incidents YTD:

00:00-04:00	2
04:00 -08:00	2
08:00 -12:00	7
12:00 - 16:00	3
16:00 - 20:00	6
20:00 - 00:00	3



2.13 Age of IP YTD:

20-25	6
26-30	8
31-35	0
36-40	4
41-45	0
46-50	1
51-60	4



2.14 General Observations

- The year to date (YTD) performance is showing an increase of 44% compared with the previous year.
- The Well Engineering directorate (UWD) has the credit for reducing their incidents rate by 25% comparing to Q2 last year.
- Oil North (OND) and Oil South (OSD) directorates saw an increase in their incidents whereas Infrastructure (UID) and Gas (GD) directorates have a successful YTD records with no LTIs.
- Petroleum Engineering (UPD) Directorate added 2 LTIs to the rate.
- PDO incidents rate increased by 100%. We suffered four (4) incidents YTD comparing to two (2) last year in the same period.
- PDO Insourcing Project is the highest to suffer LTIs.
- “Crush/Trappe” is the most activity that caused the LTIs.
- The most Basic Risk Factor which led to the incidents is “Communication” followed by “Procedures”.
- “Floorman” is the job position that had the most injures.
- “Fingers” continue to be the most injured part in the body.
- “08:00 am -12:00 pm” is the most time interval for injuries.
- “26-30” is the most age interval to have injuries.

End of Analysis

