IADC ISP PROGRAM

2016

Summary of Occupational Incidents
(Asia Pacific Water Totals)

Issued 1 July 2017
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IADC 2016 Asia Pacific Water Totals (Table 1)

<table>
<thead>
<tr>
<th>Totals</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Man-hours</td>
<td>34,362,981</td>
</tr>
<tr>
<td>Total Medical Treatment Incidents</td>
<td>21</td>
</tr>
<tr>
<td>Total Restricted Work Incidents</td>
<td>12</td>
</tr>
<tr>
<td>Total Lost Time Incidents</td>
<td>18</td>
</tr>
<tr>
<td>Total Fatalities</td>
<td>1</td>
</tr>
<tr>
<td>Total Recordables</td>
<td>52</td>
</tr>
<tr>
<td>MTO Incidence Rate</td>
<td>0.12</td>
</tr>
<tr>
<td>RWC Incidence Rate</td>
<td>0.07</td>
</tr>
<tr>
<td>LTI Incidence Rate</td>
<td>0.11</td>
</tr>
<tr>
<td>LTI Frequency Rate</td>
<td>0.55</td>
</tr>
<tr>
<td>DART Incidence Rate</td>
<td>0.18</td>
</tr>
<tr>
<td>DART Frequency Rate</td>
<td>0.90</td>
</tr>
<tr>
<td>Recordable Incidence Rate</td>
<td>0.30</td>
</tr>
<tr>
<td>Recordable Frequency Rate</td>
<td>1.51</td>
</tr>
</tbody>
</table>

MEDICAL TREATMENT INCIDENCE RATE = MTOs X 200,000 / MANHOURS (LTIs NOT INCLUDED)
RESTRICTED WORK INCIDENCE RATE = RWCs X 200,000 / MANHOURS (LTIs NOT INCLUDED)
LOST TIME INCIDENCE RATE = (LTIs+FTLs) X 200,000 / MANHOURS
LOST TIME FREQUENCY RATE = (LTIs+FTLs) X 1,000,000 / MANHOURS
DART INCIDENCE RATE = (LTIs+FTLs+RWCs) X 200,000 / MANHOURS
DART INCIDENCE RATE = (LTIs+FTLs+RWCs) X 1,000,000 / MANHOURS
RECORDABLE INCIDENCE RATE = RECORDABLES X 200,000 / MANHOURS
RECORDABLE FREQUENCY RATE = RECORDABLES X 1,000,000 / MANHOURS

Companies Reporting: Water – 31

Asia Pacific Water Incidence Rates vs Man-hours (Figure 1)
IADC 2016 Asia Pacific Water Charts

Asia Pacific Water Total Lost Time Incidents by Month (Chart 1)

Based on 17 Incidents

November 17.65%
October 5.88%
September 11.76%
August 5.88%
July 5.88%
May 5.88%
April 11.76%
March 17.65%
February 11.76%
January 5.88%
Asia Pacific Water Total Recordable Incidents by Month
(Chart 2)
Based on 51 Incidents

- January: 9.80%
- February: 13.73%
- March: 9.80%
- April: 9.80%
- May: 5.88%
- June: 9.80%
- July: 9.80%
- August: 7.84%
- September: 5.88%
- October: 9.80%
- November: 5.88%
- December: 1.96%
Asia Pacific Water Total Lost Time Incidents by Occupation (Chart 3)
Based on 17 Incidents

- Floorman: 41.18%
- Roustabout (Lease Hand): 23.53%
- Deck Supervisor (Deck Coordinator): 5.88%
- Driller (Asst. Dr.): 11.76%
- Mechanic: 11.76%
- Barge Engineer/Ballast Control Op.: 5.88%
Asia Pacific Water Total Recordable Incidents by Occupation (Chart 4)
Based on 51 Incidents

- Deck Supervisor (Deck Coordinator) 1.96%
- Rig Helper 1.96%
- Barge Engineer/Ballast Control Op. 1.96%
- Crane / Forklift Operator 3.92%
- Mechanic 5.88%
- Electrician 3.92%
- Toolpusher (Asst.TP, Tourpusher) 1.96%
- Driller (Asst. Dr.) 11.76%
- Derrickman 3.92%
- Floorman 29.41%
- Barge Engineer/Ballast Control Op. 1.96%
- Subsea Engineer 1.96%
- Roustabout (Lease Hand) 31.37%
Asia Pacific Water Total Lost Time Incidents by Body Part (Chart 5)
Based on 17 Incidents

- Shoulder(s): 5.88%
- Head: 5.88%
- Back: 5.88%
- Trunk/Torso (chest, abdomen, groin): 5.88%
- Hand(s) / Wrist(s): 17.65%
- Finger(s): 35.29%
- Foot(s) / Ankle(s): 11.76%
- Leg(s): 5.88%
- Toes: 5.88%
Asia Pacific Water Total Recordable Incidents by Body Part (Chart 6)
Based on 51 Incidents

- Finger(s): 41.18%
- Hand(s) / Wrist(s): 9.80%
- Arm(s): 1.96%
- Back: 5.88%
- Trunk/Torso (chest, abdomen, groin): 3.52%
- Head: 11.76%
- Eyes (eyelid): 1.96%
- Shoulders: 7.84%
- Feet/Ankles: 7.84%
- Legs: 1.96%
- Toes: 1.96%
- Lungs/Respiratory: 1.96%
- Knees: 1.96%
- Trunk/Torso (chest, abdomen, groin): 3.52%

Based on 51 Incidents
Asia Pacific Water Total Lost Time Incidents by Incident Type (Chart 7)
Based on 16 Incidents

- Sprain: 6.25%
- Cut: 12.50%
- Slip/Fall: Different Level: 12.50%
- Slip/Fall: Same Level: 6.25%
- Caught Between/In: 37.50%
- Struck Against: 6.25%
- Struck By: 18.75%
Asia Pacific Water Total Recordable Incidents by Incident Type (Chart 8)
Based on 49 Incidents

- Caught Between/In: 38.78%
- Struck By: 18.37%
- Slip/Fall: Same Level: 12.24%
- Slip/Fall: Different Level: 6.12%
- Strain/Overexertion: 6.12%
- Cut: 8.16%
- Chemical Inhalation: 2.04%
- Sprain: 4.08%
- Struck Against: 4.08%
Asia Pacific Water Total Lost Time Incidents by Equipment (Chart 9)
Based on 17 Incidents

- Rig Floor Winch/Deck Winch (air/hydraulic) 5.88%
- Tongs 5.88%
- Slips (drill collar clamp) 5.88%
- Iron Roughneck, Pipe Spinner, etc. 5.88%
- Pipes/Collars/Tubulars/Csg. 23.53%
- Hand Tools: Manual 5.88%
- Engines/Pumps/Machinery 11.76%
- Stairs 5.88%
- Ladders 5.88%
- Decks (grating, walkway) 5.88%
- Pressure Hoses/Lines 11.76%
- Cranes 5.88%
Asia Pacific Water Total Recordable Incidents by Equipment (Chart 10)
Based on 48 Incidents

- Rig Floor Winch/Deck Winch (air/hydraulic) 2.08%
- Top Drive (blocks, swivel, kelly) 2.08%
- Chemicals (sack, drum, pail, bulk hopper) 2.08%
- Decks (grating, walkway) 6.25%
- Ladders 2.08%
- Crane 6.25%
- Pressure Hoses/Lines 8.33%
- Material 6.25%
- BOP Stack (well head, tree) 6.25%
- Stairs 2.08%
- Engines/Pumps/Machinery 8.33%
- Hand Tools: Power 2.08%
- Hand Tools: Manual 12.50%
- Cathead/Drawworks 2.08%
- Slings (rope, cable, chain, web) 2.08%
- Pipes/Collars/Tubulars/Csg. 16.67%
- Iron Roughneck, Pipe Spinner, etc. 2.08%
- Slips (drill collar clamp) 2.08%
- Tongs 8.33%
- Cathead/Drawworks 2.08%
- Slings (rope, cable, chain, web) 2.08%
- Hand Tools: Manual 12.50%
- Engine/Pumps/Machinery 8.33%
- Rig Floor Winch/Deck Winch (air/hydraulic) 2.08%
- Top Drive (blocks, swivel, kelly) 2.08%
- Chemicals (sack, drum, pail, bulk hopper) 2.08%
- Decks (grating, walkway) 6.25%
- Ladders 2.08%
- Crane 6.25%
- Pressure Hoses/Lines 8.33%
- Material 6.25%
- BOP Stack (well head, tree) 6.25%
- Stairs 2.08%
- Engines/Pumps/Machinery 8.33%
- Hand Tools: Power 2.08%

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Asia Pacific Water Total Lost Time Incidents by Operation (Chart 11)
Based on 17 Incidents

- Routine Drilling Oper.: 35.29%
- Running Casing/Tubing: 5.88%
- Laying Down/Picking up Tubulars: 11.76%
- Equipment Repairs or Maintenance: 11.76%
- Tripping in/out: 11.76%
- Running/Retrieving Anchors: 5.88%
- Walking: 5.88%
- Material Handling: Crane/Cherry Picker: 5.88%
- Material Handling: Manual: 5.88%
Asia Pacific Water Total Recordable Incidents by Operation (Chart 12)
Based on 51 Incidents

- Routine Drilling Oper.: 25.49%
- Running Casing/Tubing: 5.88%
- Laying Down/Picking up Tubulars: 5.88%
- Material Handling: Manual: 5.88%
- Material Handling: Crane/Cherry Picker: 3.92%
- Material Handling: Rig Floor Winch: 1.96%
- Rigging Up/Down: 1.96%
- BOP Stack Install/Maintenance: 7.84%
- Walking: 3.92%
- Abrasive Blasting/Paint/Scale Removal: 1.96%
- Equipment Repairs or Maintenance: 17.65%
- Painting (painting related tasks): 3.92%
- Handling Riser: 5.88%
- Tripping in/out: 5.88%
- Running/Retrieving Anchors: 1.96%
- Material Handling: Manual: 5.88%
Asia Pacific Water Total Lost Time Incidents by Location (Chart 13)
Based on 17 Incidents

- Anchor Winch Station/Area: 5.88%
- Cherry Picker/Crane: 5.88%
- Mud Pump Room: 5.88%
- Rig Pad/Rig Decks: 11.76%
- Stairs/Ladders: 5.88%
- Engine Generator Room: 5.88%
- Pipe Rack/Pipe Deck: 11.76%
- Rig Floor: 47.06%
Asia Pacific Water Total Recordable Incidents by Location (Chart 14)
Based on 51 Incidents

- Anchor Winch Station/Area: 1.96%
- Cherry Picker/Grane: 3.92%
- Cellar / Sub / Moonpool: 5.88%
- Living/Camp Areas/ Accommodations: 1.96%
- Work Rooms change, storage, room: 7.84%
- Rig Pad/Rig Decks: 9.80%
- Stairs/Ladders: 1.96%
- Engine Generator Room: 1.96%
- Mud Mixing Tank/Area: 1.96%
- BOP Stack /well head/tree Area: 3.92%
- Mud Pump Room: 3.92%
- Pipe Rack/ Pipe Deck: 19.61%

Rig Floor: 35.29%
Asia Pacific Water Total Lost Time Incidents by Time in Service (Chart 15)
Based on 17 Incidents

10+ yrs.
11.76%

>5 yrs. < 10 yrs.
17.65%

>1 yr. < 5 yrs.
70.59%
Asia Pacific Water Total Recordable Incidents by Time in Service (Chart 16)
Based on 50 Incidents

- >1 yr. < 5 yrs. 60.00%
- >5 yrs. < 10 yrs. 16.00%
- >6 mos. < 1 yr. 10.00%
- 0 mo. < 3 mos. 6.00%
- 10+ yrs. 8.00%

Asia Pacific Water Total Lost Time Incidents by Time of Day (Chart 17)
Based on 17 Incidents

- 17:00: 5.88%
- 16:00: 23.53%
- 15:00: 11.76%
- 12:00: 5.88%
- 11:00: 11.76%
- 10:00: 5.88%
- 9:00: 5.88%
- 8:00: 5.88%
- 7:00: 5.88%
- 6:00: 5.88%
- 5:00: 5.88%
- 4:00: 5.88%
- 3:00: 5.88%
- 2:00: 5.88%
- 1:00: 11.76%
- 0:00: 5.88%

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Asia Pacific Water Total Recordable Incidents by Time of Day (Chart 18)
Based on 51 Incidents

- 23:00: 7.84%
- 22:00: 7.84%
- 21:00: 1.96%
- 20:00: 3.92%
- 19:00: 1.96%
- 18:00: 1.96%
- 17:00: 1.96%
- 16:00: 11.76%
- 15:00: 9.80%
- 14:00: 1.96%
- 13:00: 1.96%
- 12:00: 1.96%
- 11:00: 13.73%
- 10:00: 5.88%
- 9:00: 5.88%
- 8:00: 1.96%
- 7:00: 3.92%
- 6:00: 3.92%
- 5:00: 1.96%
- 4:00: 3.92%
- 3:00: 1.96%
- 2:00: 7.84%
- 1:00: 3.92%
- 0:00: 7.84%
Asia Pacific Water Total Lost Time Incidents by Age (Chart 19)
Based on 15 Incidents

- 26 - 35: 60.00%
- 18 - 25: 6.67%
- 46 - 55: 6.67%
- 36 - 45: 26.67%
- 28 - 35: 60.00%
Asia Pacific Water Total Recordable Incidents by Age (Chart 20)
Based on 46 Incidents

- 26 - 35: 54.35%
- 36 - 45: 21.74%
- 46 - 55: 10.87%
- 56 - 65: 2.17%
- 18 - 25: 10.87%