IADC ISP PROGRAM

Summary of Occupational Incidents
(European Land Totals)

Issued 1 July 2017
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### IADC 2016 European Land Totals (Table 1)

<table>
<thead>
<tr>
<th>Category</th>
<th>Total</th>
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<tbody>
<tr>
<td>Total Man-hours</td>
<td>40,293,752</td>
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<tr>
<td>Total Medical Treatment Incidents</td>
<td>7</td>
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<tr>
<td>Total Restricted Work Incidents</td>
<td>5</td>
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<tr>
<td>Total Lost Time Incidents</td>
<td>33</td>
</tr>
<tr>
<td>Total Fatalities</td>
<td>1</td>
</tr>
<tr>
<td>Total Recordables</td>
<td>46</td>
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<tr>
<td>MTO Incidence Rate</td>
<td>0.03</td>
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<tr>
<td>RWC Incidence Rate</td>
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<tr>
<td>LTI Incidence Rate</td>
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<tr>
<td>LTI Frequency Rate</td>
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<tr>
<td>DART Incidence Rate</td>
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<tr>
<td>DART Frequency Rate</td>
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<td>Recordable Incidence Rate</td>
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<tr>
<td>Recordable Frequency Rate</td>
<td>1.14</td>
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</tbody>
</table>

Companies Reporting: Land – 11

Medical Treatment Incidence Rate = MTOs X 200,000
Restricted Work Incidence Rate = RWCs X 200,000
Lost Time Incidence Rate = LTIs + FTLs X 200,000
Lost Time Frequency Rate = LTIs + FTLs X 1,000,000
DART Incidence Rate = LTIs + RWC X 200,000
DART Frequency Rate = LTIs + RWC X 1,000,000
Recordable Incidence Rate = RCRD X 200,000
Recordable Frequency Rate = RCRD X 1,000,000

### European Land Total Incidence Rates vs Man-hours (Figure 1)
IADC 2016 European Land Charts
European Land Total Lost Time Incidents by Month (Chart 1)
Based on 33 Incidents

- December: 6.06%
- November: 9.09%
- October: 12.12%
- September: 3.03%
- August: 9.09%
- July: 9.09%
- June: 18.18%
- May: 6.06%
- April: 15.15%
- March: 3.03%
- February: 3.03%
- January: 6.06%
European Land Total Recordable Incidents by Month (Chart 2)
Based on 46 Incidents

- January: 8.70%
- February: 8.70%
- March: 2.17%
- April: 10.87%
- May: 6.52%
- June: 15.22%
- July: 6.52%
- August: 6.52%
- September: 6.52%
- October: 8.70%
- November: 10.87%
- December: 8.70%
European Land Total Lost Time Incidents by Occupation (Chart 3)
Based on 33 Incidents

- Driller (Asst. Dr.) 30.30%
- Motorman 9.09%
- Floorman 18.18%
- Derrickman 12.12%
- Rig Helper 6.06%
- Toolpusher (Asst.TP, Tourpusher) 3.03%
- Electrician (Electronic Technician) 3.03%
- Mechanic (Repair Technician) 6.06%
- Superintendent/other Supervisors 3.03%
- Welder 3.03%
- Roustabout (Lease Hand) 6.06%
European Land Total Recordable Incidents by Occupation (Chart 4)
Based on 46 Incidents

- Driller (Asst. Dr.): 26.09%
- Floorman: 21.74%
- Derrickman: 13.04%
- Electrician (Electronic Technician): 10.87%
- Mechanic (Repair Technician): 6.52%
- Motorman: 6.52%
- Toolpusher (Asst.TP, Tourpusher): 2.17%
- Rig Helper: 4.35%
- Welder: 2.17%
- Roustabout (Lease Hand): 6.52%
- Truck Driver (Truck Pusher): 2.17%
- Superintendent/other Supervisors: 2.17%
- Floorman: 21.74%
- Driller (Asst. Dr.): 26.09%
European Land Total Lost Time Incidents by Body Part (Chart 5)
Based on 33 Incidents

- Legs: 24.24%
- Trunk/Torso (chest, abdomen, groin): 15.15%
- Back: 9.09%
- Head: 9.09%
- Eyes (eyelid): 3.03%
- Arm(s): 3.03%
- Finger(s): 12.12%
- Hand(s) / Wrist(s): 9.09%
- Feet/Ankles: 12.12%
- Lungs/Respiratory: 3.03%
- Trunk/Torso: 15.15%
- Back: 9.09%
- Head: 9.09%
- Eyes (eyelid): 3.03%
European Land Total Recordable Incidents by Body Part (Chart 6)
Based on 46 Incidents

- Digestive/Internal: 2.17%
- Lungs/Respiratory: 2.17%
- Feet/Ankles: 8.70%
- Leg(s): 21.74%
- Finger(s): 19.57%
- Hand(s) / Wrist(s): 6.52%
- Arm(s): 4.35%
- Back: 8.70%
- Head: 6.52%
- Trunk/Torso (chest, abdomen, groin): 17.39%
European Land Total Lost Time Incidents by Incident Type (Chart 7)
Based on 33 Incidents

- Caught Between/in (24.24%)
- Struck By (15.15%)
- Flame/heat/steam (contact/exposed) (15.15%)
- Caught On (3.03%)
- Sprain (6.06%)
- Strain/Overexertion (3.03%)
- Vehicle (3.03%)
- Exposure to Gas (3.03%)
- Cut (3.03%)
- Debris (3.03%)
- Electrical Shock (3.03%)
- Slip/Fall: Same Level (9.99%)
- Slip/Fall: Different Level (9.99%)
- Slip/Fall: Different Level (9.99%)
- Slip/Fall: Same Level (9.99%)
- Caught Between/in (24.24%)
- Struck By (15.15%)
- Flame/heat/steam (contact/exposed) (15.15%)
- Caught On (3.03%)
- Sprain (6.06%)
- Strain/Overexertion (3.03%)
- Vehicle (3.03%)
- Exposure to Gas (3.03%)
- Cut (3.03%)
- Debris (3.03%)
- Electrical Shock (3.03%)
European Land Total Recordable Incidents by Incident Type (Chart 8)
Based on 46 Incidents

Caught Between/In: 23.91%
Struck By: 21.74%
Caught On: 2.17%
Struck Against: 2.17%
Sprain: 8.70%
Slip/Fall: Different Level: 8.70%
Slip/Fall: Same Level: 6.52%
Exposure to Gas: 2.17%
Vehicle: 2.17%
Cut: 4.35%
Debris: 2.17%
Flame/heat/steam (contact/exposed): 10.87%
Electrical Shock: 2.17%
Strain/Overexertion: 2.17%
Slip/Fall: Different Level: 8.70%
European Land Total Lost Time Incidents by Equipment (Chart 9)
Based on 31 Incidents

- Boat Cargo (skids, tubulars, containers, etc.) 3.23%
- Decks (grating, walkway) 6.45%
- Ladders 6.45%
- Chemicals (sack, drum, pail, bulk hopper) 3.23%
- Pressure Hoses/Lines 3.23%
- Material 3.23%
- Well Control (BOP) Stack (well head, tree) 6.45%
- Stairs 3.23%
- Car, truck, bus 3.23%
- Engines/Pumps/Machinery 19.35%
- Iron Roughneck, Pipe Spinner, etc. 3.23%
- Elevators 3.23%
- Hand Tools: Manual 6.45%
- Pipes/Collars/Tubulars/Csg. 25.81%
European Land Total Recordable Incidents by Equipment (Chart 10)
Based on 43 Incidents

- Anchor Chains/Cables/Winches: 2.33%
- Boat Cargo (skids, tubulars, containers, etc.): 2.33%
- Tongs: 6.98%
- Elevators: 2.33%
- Iron Roughneck, Pipe Spinner, etc.: 2.33%
- Pipes/Collars/Tubulars/Csg.: 18.60%
- Hand Tools: Manual: 6.98%
- Hand Tools: Power: 2.33%
- Engines/Pumps/Machinery: 18.60%
- Well Control (BOP) Stack (well head, tree): 4.65%
- Material: 6.98%
- Pressure Hoses/Lines: 4.65%
- Ladders: 4.65%
- Decks (grating, walkway): 6.98%
- Car, truck, bus: 4.65%
- Stairs: 2.33%
European Land Total Lost Time Incidents by Operation (Chart 11)
Based on 33 Incidents

- Walking: 12.12%
- Special Operations (wireline, perforating, etc.): 3.03%
- Travel/Transportation: 3.03%
- Tripping in/out (makeup/brakeout BHA, test tools, etc.): 15.15%
- Making Connection: 3.03%
- Routine Drilling Operations: 9.09%
- Running Casing/Tubing (rig up/down casing tools): 3.03%
- Laying Down/Picking up Pipe/Tubulars: 6.06%
- Material Handling: Manual: 6.06%
- Material Handling: Crane/Cherry Picker: 3.03%
- Material Handling: Winch Truck: 3.03%
- Rigging Up/Down (rig move preparation, rig move): 15.15%
- Well Control (BOP) Stack (well head/tree) Install/Maintenance: 6.06%
- Rig/Equipment Repairs or Maintenance: 9.09%
- Mud Mixing/Pumping: 3.03%
- Tripping in/out (makeup/brakeout BHA, test tools, etc.): 15.15%

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European Land Total Recordable Incidents by Operation (Chart 12)
Based on 46 Incidents

- Special Operations (wireline, perforating, etc.): 2.17%
- Material Handling: Winch Truck: 2.17%
- Travel/Transportation: 2.17%
- Tripping in/out (makeup/brakeout, BHA, test tools, etc.): 15.22%
- Making Connection: 4.35%
- Routine Drilling Operations: 13.04%
- Running Casing/Tubing (rig, up/down csg. tools): 2.17%
- Rigging Up/Down (rig move, preparation, rig move): 13.04%
- Material Handling: Manual: 4.35%
- Laying Down/Picking up Pipe/Tubulars: 4.35%
- Material Handling: Crane/Cherry Picker: 2.17%
- Material Handling: Winch Truck: 2.17%
- Rig/Equipment Repairs or Maintenance: 13.04%
- Well Control (BOP) Stack (well head/tree) Install/Maintenance: 6.52%
- Well Testing: 2.17%
- Walking: 10.87%
- Laying Down/Picking up Pipe/Tubulars: 4.35%
- Making Connection: 4.35%
European Land Total Lost Time Incidents by Location (Chart 13)
Based on 32 Incidents

- Rig Pad/Rig Decks: 18.75%
- Well Control (BOP) Stack (well head/tree) Area: 6.25%
- Mud Mixing Tank/Area: 3.13%
- Engine Room/Generator Room: 3.13%
- Mud Pump Room: 6.25%
- Rig Floor (rotary, pipe set back area): 15.63%
- Living / Camp Areas / Accommodations: 9.38%
- Stairs/Ladders: 3.13%
- Work Rooms (change house, storage house/room): 3.13%
- Derrick/Mast (crown, monkey/stabbing board, a-frame): 9.38%
- Truck, Car, Bus: 3.13%
- Pipe Rack/Pipe Deck: 18.75%
- Rig Floor (rotary, pipe set back area): 15.63%
- Engine Room/Generator Room: 3.13%
- Mud Mixing Tank/Area: 3.13%
- Well Control (BOP) Stack (well head/tree) Area: 6.25%
- Living / Camp Areas / Accommodations: 9.38%
- Stairs/Ladders: 3.13%
- Work Rooms (change house, storage house/room): 3.13%
- Derrick/Mast (crown, monkey/stabbing board, a-frame): 9.38%
- Truck, Car, Bus: 3.13%
- Pipe Rack/Pipe Deck: 18.75%
European Land Total Recordable Incidents by Location (Chart 14)
Based on 45 Incidents

- Rig Floor (rotary, pipe set back area) 20.00%
- Engine Room/Generator Room 2.22%
- Mud Pits/Tanks 4.44%
- Shale Shaker 4.44%
- Truck, Car, Bus 4.44%
- Mud Mixing Tank/Area 2.22%
- Fuel/Water Storage Tanks 2.22%
- Work Rooms (change house, storage house/room) 2.22%
- Stairs/Ladders 2.22%
- Living / Camp Areas / Accommodations 6.67%
- Rig Pad/Rig Decks 15.56%
- Well Control (BOP) Stack (well head/tree) Area 6.67%
- Derrick/Mast (crown, monkey/stabbing board, a-frame) 6.67%
- Rig Floor (rotary, pipe set back area) 20.00%
- Engine Room/Generator Room 2.22%
- Mud Pits/Tanks 4.44%
- Shale Shaker 4.44%
- Truck, Car, Bus 4.44%
- Mud Mixing Tank/Area 2.22%
- Fuel/Water Storage Tanks 2.22%
- Work Rooms (change house, storage house/room) 2.22%
- Stairs/Ladders 2.22%
- Living / Camp Areas / Accommodations 6.67%
- Rig Pad/Rig Decks 15.56%
- Well Control (BOP) Stack (well head/tree) Area 6.67%
- Derrick/Mast (crown, monkey/stabbing board, a-frame) 6.67%
- Rig Floor (rotary, pipe set back area) 20.00%
- Engine Room/Generator Room 2.22%
- Mud Pits/Tanks 4.44%
- Shale Shaker 4.44%
- Truck, Car, Bus 4.44%
- Mud Mixing Tank/Area 2.22%
- Fuel/Water Storage Tanks 2.22%
- Work Rooms (change house, storage house/room) 2.22%
- Stairs/Ladders 2.22%
- Living / Camp Areas / Accommodations 6.67%
- Rig Pad/Rig Decks 15.56%
- Well Control (BOP) Stack (well head/tree) Area 6.67%
- Derrick/Mast (crown, monkey/stabbing board, a-frame) 6.67%
- Rig Floor (rotary, pipe set back area) 20.00%
- Engine Room/Generator Room 2.22%
- Mud Pits/Tanks 4.44%
- Shale Shaker 4.44%
- Truck, Car, Bus 4.44%
- Mud Mixing Tank/Area 2.22%
- Fuel/Water Storage Tanks 2.22%
- Work Rooms (change house, storage house/room) 2.22%
- Stairs/Ladders 2.22%
- Living / Camp Areas / Accommodations 6.67%
- Rig Pad/Rig Decks 15.56%
- Well Control (BOP) Stack (well head/tree) Area 6.67%
- Derrick/Mast (crown, monkey/stabbing board, a-frame) 6.67%
- Rig Floor (rotary, pipe set back area) 20.00%
- Engine Room/Generator Room 2.22%
- Mud Pits/Tanks 4.44%
- Shale Shaker 4.44%
- Truck, Car, Bus 4.44%
- Mud Mixing Tank/Area 2.22%
- Fuel/Water Storage Tanks 2.22%
- Work Rooms (change house, storage house/room) 2.22%
- Stairs/Ladders 2.22%
- Living / Camp Areas / Accommodations 6.67%
- Rig Pad/Rig Decks 15.56%
- Well Control (BOP) Stack (well head/tree) Area 6.67%
- Derrick/Mast (crown, monkey/stabbing board, a-frame) 6.67%
- Rig Floor (rotary, pipe set back area) 20.00%
- Engine Room/Generator Room 2.22%
- Mud Pits/Tanks 4.44%
- Shale Shaker 4.44%
- Truck, Car, Bus 4.44%
- Mud Mixing Tank/Area 2.22%
- Fuel/Water Storage Tanks 2.22%
- Work Rooms (change house, storage house/room) 2.22%
- Stairs/Ladders 2.22%
- Living / Camp Areas / Accommodations 6.67%
- Rig Pad/Rig Decks 15.56%
- Well Control (BOP) Stack (well head/tree) Area 6.67%
- Derrick/Mast (crown, monkey/stabbing board, a-frame) 6.67%
- Rig Floor (rotary, pipe set back area) 20.00%
- Engine Room/Generator Room 2.22%
- Mud Pits/Tanks 4.44%
- Shale Shaker 4.44%
- Truck, Car, Bus 4.44%
- Mud Mixing Tank/Area 2.22%
- Fuel/Water Storage Tanks 2.22%
- Work Rooms (change house, storage house/room) 2.22%
- Stairs/Ladders 2.22%
- Living / Camp Areas / Accommodations 6.67%
- Rig Pad/Rig Decks 15.56%
- Well Control (BOP) Stack (well head/tree) Area 6.67%
- Derrick/Mast (crown, monkey/stabbing board, a-frame) 6.67%
- Rig Floor (rotary, pipe set back area) 20.00%
- Engine Room/Generator Room 2.22%
- Mud Pits/Tanks 4.44%
- Shale Shaker 4.44%
- Truck, Car, Bus 4.44%
- Mud Mixing Tank/Area 2.22%
- Fuel/Water Storage Tanks 2.22%
- Work Rooms (change house, storage house/room) 2.22%
- Stairs/Ladders 2.22%
- Living / Camp Areas / Accommodations 6.67%
- Rig Pad/Rig Decks 15.56%
- Well Control (BOP) Stack (well head/tree) Area 6.67%
- Derrick/Mast (crown, monkey/stabbing board, a-frame) 6.67%
- Rig Floor (rotary, pipe set back area) 20.00%
- Engine Room/Generator Room 2.22%
- Mud Pits/Tanks 4.44%
- Shale Shaker 4.44%
- Truck, Car, Bus 4.44%
- Mud Mixing Tank/Area 2.22%
- Fuel/Water Storage Tanks 2.22%
- Work Rooms (change house, storage house/room) 2.22%
- Stairs/Ladders 2.22%
- Living / Camp Areas / Accommodations 6.67%
- Rig Pad/Rig Decks 15.56%
- Well Control (BOP) Stack (well head/tree) Area 6.67%
- Derrick/Mast (crown, monkey/stabbing board, a-frame) 6.67%
- Rig Floor (rotary, pipe set back area) 20.00%
- Engine Room/Generator Room 2.22%
- Mud Pits/Tanks 4.44%
- Shale Shaker 4.44%
- Truck, Car, Bus 4.44%
- Mud Mixing Tank/Area 2.22%
- Fuel/Water Storage Tanks 2.22%
- Work Rooms (change house, storage house/room) 2.22%
- Stairs/Ladders 2.22%
- Living / Camp Areas / Accommodations 6.67%
- Rig Pad/Rig Decks 15.56%
- Well Control (BOP) Stack (well head/tree) Area 6.67%
- Derrick/Mast (crown, monkey/stabbing board, a-frame) 6.67%
- Rig Floor (rotary, pipe set back area) 20.00%
- Engine Room/Generator Room 2.22%
- Mud Pits/Tanks 4.44%
- Shale Shaker 4.44%
- Truck, Car, Bus 4.44%
- Mud Mixing Tank/Area 2.22%
- Fuel/Water Storage Tanks 2.22%
- Work Rooms (change house, storage house/room) 2.22%
- Stairs/Ladders 2.22%
- Living / Camp Areas / Accommodations 6.67%
- Rig Pad/Rig Decks 15.56%
- Well Control (BOP) Stack (well head/tree) Area 6.67%
- Derrick/Mast (crown, monkey/stabbing board, a-frame) 6.67%
- Rig Floor (rotary, pipe set back area) 20.00%
- Engine Room/Generator Room 2.22%
European Land Total Lost Time Incidents by Time in Service (Chart 15)
Based on 33 Incidents

- >1 yr. < 5 yrs.: 57.58%
- >1 yr. < 5 yrs.: 57.58%
- >6 mos. < 1 yr.: 6.06%
- >3 mos. < 6 mos.: 3.03%
- 0 mo. < 3 mos.: 6.06%
- 10+ yrs.: 15.15%
- >5 yrs. < 10 yrs.: 12.12%
- >6 mos. < 1 yr.: 6.06%

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European Land Total Recordable Incidents by Time in Service (Chart 16)
Based on 46 Incidents

0 mo. < 3 mos. 8.70%
>3 mos. < 6 mos. 6.52%
>6 mos. < 1 yr. 4.35%
>1 yr. < 5 yrs. 47.83%
>5 yrs. < 10 yrs. 15.22%
10+ yrs. 17.39%
European Land Total Lost Time Incidents by Time of Day (Chart 17)
Based on 33 Incidents

- 24:00:00 - 9.09%
- 3:00:00 - 9.09%
- 4:00:00 - 6.06%
- 8:00:00 - 3.03%
- 9:00:00 - 9.09%
- 10:00:00 - 3.03%
- 11:00:00 - 12.12%
- 12:00:00 - 3.03%
- 13:00:00 - 3.03%
- 15:00:00 - 15.15%
- 16:00:00 - 6.06%
- 17:00:00 - 3.03%
- 18:00:00 - 3.03%
- 19:00:00 - 3.03%
- 20:00:00 - 9.09%
- 21:00:00 - 3.03%
- 22:00:00 - 3.03%
- 23:00:00 - 3.03%
European Land Total Recordable Incidents by Time of Day (Chart 18)
Based on 46 Incidents

- 24:00:00 6.52%
- 23:00 2.17%
- 22:00 2.17%
- 21:00 2.17%
- 20:00 6.52%
- 19:00 4.35%
- 18:00 4.35%
- 17:00 4.35%
- 16:00 6.52%
- 15:00 13.04%
- 14:00 2.17%
- 13:00 2.17%
- 12:00 2.17%
- 11:00 10.87%
- 10:00 2.17%
- 09:00 6.52%
- 08:00 10.87%
- 07:00 2.17%
- 06:00 2.17%
- 05:00 4.35%
- 04:00 4.35%
- 03:00 6.52%
- 02:00 2.17%
- 01:00 2.17%
- 00:00 6.52%

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European Land Total Lost Time Incidents by Age (Chart 19)
Based on 32 Incidents

- 18 - 25: 15.63%
- 26 - 35: 31.25%
- 36 - 45: 18.75%
- 46 - 55: 25.00%
- 56 - 65: 9.38%
European Land Total Recordable Incidents by Age (Chart 20)
Based on 44 Incidents

- 26 - 35: 27.27%
- 36 - 45: 22.73%
- 46 - 55: 25.00%
- 56 - 65: 11.36%
- 18 - 25: 13.64%