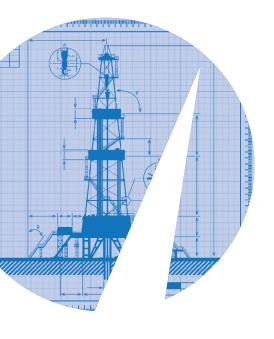


# PRESSURE SENSING SOLUTIONS Drilling

DE

# solutions for Oilor Gas



# The Value of Viatran to Your Operation

Viatran value is measured in maximum reliability and minimal repair, unlike products that result in less durability and more downtime for replacement. Viatran value is worth your investment for the long run:

#### **♦ PRODUCTS**

50 years of proven solutions

#### • TECHNICAL SUPPORT Expert problem solvers

### **CUSTOMER SERVICE**

Fast, friendly and honest

## Downtime is expensive. Protect your bottom line with quality products from Viatran.

For half a century, Viatran has been solving pressure and level measurement problems in some of the world's toughest application environments. With a long-standing reputation of superior construction and rugged performance, Viatran pressure and level transmitters have been meeting the demands of the oil and gas industry in drilling, secondary recovery, offshore and land-based production.

From the North Slope of Alaska to the Sahara Desert, oil rig environments require process instruments that must be able to withstand constant subjection to changing pressure, temperature, humidity, corrosion, vibration and shock. Viatran products measure up to each task.

Viatran's substantial expertise in oil and gas allows us to provide outstanding solutions and support upon which you can depend for durable quality and fast service to keep your operation up and running efficiently.



Viatran products are designed to promote oil rig safety at every turn, solving any problems that may occur quickly and easily – with maximum productivity and minimum downtime.



Our rugged pressure sensors and transmitters are renowned for providing robust performance and reliable pressure measurement in the even the toughest environments.

## VIATRAN PRESSURE SENSORS IN OIL RIG APPLICATIONS

Designed for rugged environmental conditions



- Hook Load Measure weight of drill string Model 570
- 2 Top Drive

Measure hydraulic pressure for control systems **Models 570, 571** 

Standpipe Measure standpipe pressure Models 511, 521

#### Iron Roughneck

Measure torque while attaching drill pipe using hydraulic pressure measurements **Models 570, 571** 

Catwalks

Measure hydraulic pressure **Models 570, 571, 347** 

#### 6 Accumulator Unit

Measure inlet/outlet pressure **Models 570, 571** 

7 Water Reservoir or Tank Levels Measure fluid levels Model DLT

8 **Rig Hydraulic Lift** Measure hydraulic pressure, monitor raising or lowering of deck for directional drilling **Models 570, 571** 

9 Choke Manifold Measure manifold pressure Models 511, 521

10 **BOP (Blowout Protector)** Measure wellhead pressure

Models 570, 571



Power Generation Units Measure lube oil, water and hydraulic fluid pressures Models 570, 571, 347

#### 12 Fluid Manifold

Measure drilling fluid pressure Models 511, 521, 570, 571

#### 3 Mud Return Line

Measure drilling mud pressure to monitor and control mud flow Models 511, 521

#### Mud Pump (Inlet Pressure)

Measure pressure and flow of mud media Model 385

- 5 Mud Pump (Outlet Pressure) Measure pressure and flow of mud media Models 511, 521
- 16 **Transmission Pressure** Measure pressure of transmission oil **Model 347**
- 7 Mud Pump (Lubrication) Measure pressure of lube oil lines Model 347
- 18 Water Reservoir or Tank Levels Measure fluid levels Model DLT

## PRESSURE AND LEVEL MANAGEMENT

with transmitters from Viatran Key players in the Oil and Gas industry rely on Viatran because our products are proven, our technical expertise is deep and our service team is laser focused on helping our customers grow their business.

Viatran pressure transmitters play a major role in maintaining safety on an oil rig. In order to monitor product, process and hydraulic pressures, our transmitters reliably trigger safety shutdowns when hazardous conditions are detected. Viatran addresses specific pressure transmitter applications on oil rigs, including measuring ballast tank levels and hydraulic pressure on jack-up drilling rigs, as well as pressures on platform flow lines, additive metering pumps, subsea injection valves and well cleanouts.

			Viatran Transmitter Model Number						
ID	Application	Sensor Purpose	511	521	570	571	347	385	DLT
1	Hook Load	Measure weight of drill string			x				
2	Top Drive	Measure hydraulic pressure for control systems			х	х			
3	Standpipe	Measure standpipe pressure	X	x					
4	Iron Roughneck	Measure torque while attaching drill pipe using hydraulic pressure measurements			x	x			
5	Catwalks	Measure hydraulic pressure			X	Х	Х		
6	Accumulator Unit	Measure inlet/outlet pressure			Х	х			
7	Water Reservoir or Tank Levels	Measure fluid levels							х
8	Rig Hydraulic Lift	Measure hydraulic pressure, monitor raising or lowering of deck for directional drilling			x	x			
9	Choke Manifold	Measure manifold pressure	Х	Х					
10	BOP (Blowout Protector)	Measure wellhead pressure			х	х			
11	Power Generation Units	Measure lube oil, water & hydraulic fluid pressures			х	х	х		
12	Fluid Manifold	Measure drilling fluid pressure	X	x	X	x			
B	Mud Return Line	Measure drilling mud pressure to monitor & control mud flow	x	х					
14	Mud Pump (Inlet Pressure)	Measure pressure & flow of mud media						Х	
15	Mud Pump (Outlet Pressure)	Measure pressure & flow of mud media	x	х					
16	Transmission Pressure	Measure pressure of transmission oil					х		
17	Mud Pump (Lubrication)	Measure pressure of lube oil lines					х		
18	Water Reservoir or Tank Levels	Measure fluid levels							х

## PERFORMANCE AND RELIABILITY

Solutions custom-fit to your application

#### 511 Hammer Union (Figure 1502) **MWD, Mud Pump Pressure**

• The workhorse of the oil patch with

design eliminating fluid ingress

- patented vibration and shock-resistant
- · Easy access connector housing with a 77% greater area
- NACE Compliant (MR0175-2009 & ISO 15156)
- FM, IECEx, ATEX and PED approvals available
- · Repairable and field adjustable

#### 521 Hammer Union (Figure 2002) **Pump Discharge Pressure**

- Hammer Union pressure transmitter for use in oil well cementing, fracturing and acidizing
- Shock and vibration resistant
- External adjustments
- Pressure up to 25,000 PSI (1,724 bar)
- FM, IECEx, ATEX and PED approvals available

#### **570 Hazardous Location Rig Safety**

- · A better alternative to conventional process transmitters in a reliable, costeffective, watertight/submersible design
- All stainless steel construction and lightweight to enable direct mounting on process piping
- Exotic wetted materials available
- FM, ATEX, CSA and PED approvals available
- Pressure up to 100,000 PSI/PSIA (7,000 bar)

#### **571 Hazardous Location Rig Safety**

- · All welded stainless steel, watertight/ submersible design
- Field rangeable
- · Hermetically sealed magnetically coupled adjustments
- FM, ATEX, CSA and PED approvals available
- Pressure up to 100,000 PSI/PSIA (7,000 bar)

#### 347 General Purpose Lube Oil & Transmission

- Low-cost, rugged pressure transmitter provides a reliable measurement solution
- Sealed and stable
- Resistant to pressure spikes
- Welded stainless steel construction

#### 385 Flush Tip **Mud Pump Inlet Pressure**

- Zero cavity design\*
- Isolated sensor design virtually eliminates torque effect on output signal
- Solid stainless steel machined diaphragm
- Withstands pressure spikes up to 5x proof and 20x burst pressure
- Fully welded and sealed housing impervious to fluid ingress \*Patents Pending

#### **DLT Detachable Level Transmitters**

- A robust pressure transmitter that is submersible, measuring liquid level and depth
- DLT Series allows for a quick sensor swap without removal of installed cable
- · Detachable and replaceable sensor head
- Available in ranges from 0-40 inches W.C. to 0-835 feet W.C.
- PUR, PVC or FEP cables offered



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