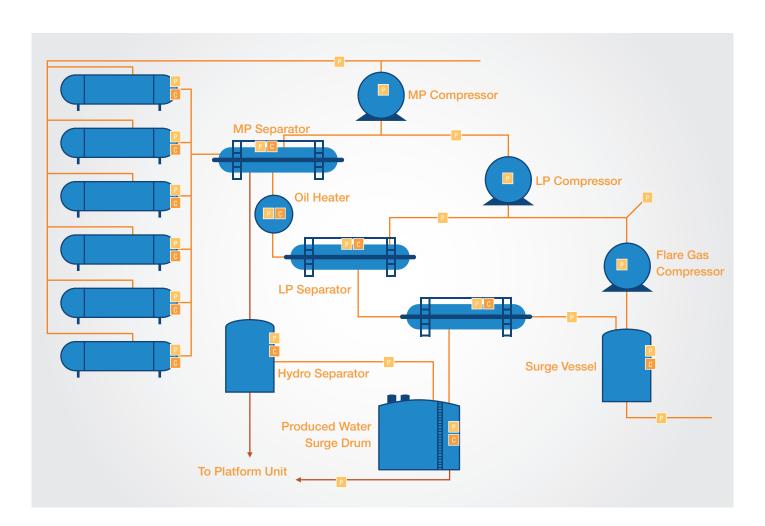
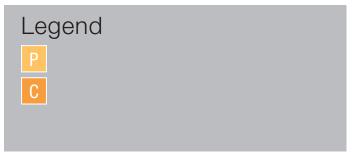
Oil & gas production - offshore Industry specific process diagram

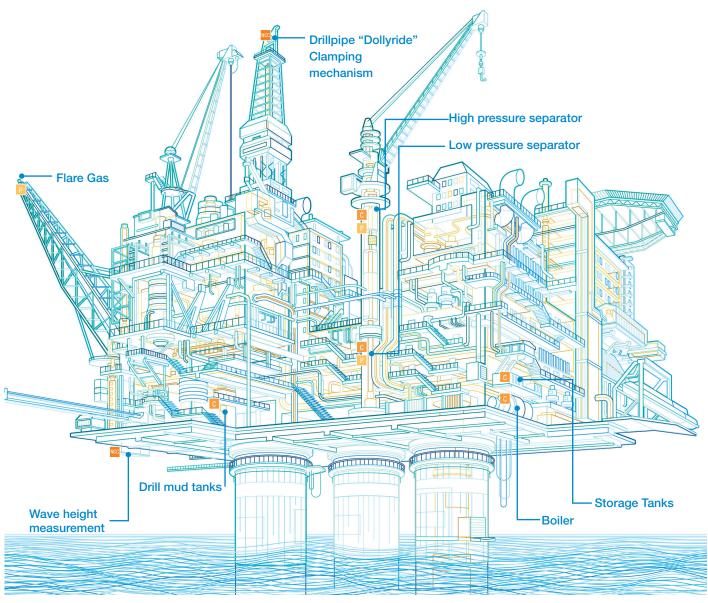
With over 35 years of experience in oil and gas production level instrumentation, ABB has solutions to the most challenging level applications. Both contact and non-contact technologies are employed in oil and gas production for on and offshore level measurement. These include guided wave radar transmitters, magnetic level gauges, magnetostrictive level transmitters, laser transmitters and a variety of point level technologies. Accurate level measurement is critical in the Oil & Gas production field. ABB has the knowledge and products to keep production on line and safe for personnel and the environment.

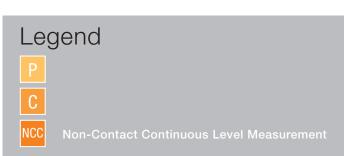






Offshore Oil Production Diagram





Product		Features		
	RS85 Vibrating Level Switch	 Detects at variety of liquid levels Special alloy sensors Field selectable parameters with external magnet or internal push buttons (fail safe, density) Extended probe lengths to 120" (3048 mm) 		
	MS50 Multi-Point Level Switch	 Up to six SPDT switches per unit (NO and NC contacts) Interface level capability Trip points adjustable without removing vessel from service Vibration resistant (Multi-float option only) Suitable for high temperature applications 316L stainless steel wetted parts standard 		
	TX Thermal Dispersion Switch	 One switch can be configured for either gas or liquid flow, liquid level, interface level or temperature Explosion proof, no moving parts Temperature range of -320°F to 900°F (-195°C to 482°C) Pressure to 10,000 psig (689 bar) 316L stainless steel all welded construction standard 		
	LS Series Mechanical Level Switch	 One step switch point adjustment Precision fabricated floats and displacers Compact switching mechanism eliminates bulky housing and traditional bias springs Easily retrofitted to most competitor models 		
	MS41 Switch	 Use with KM26 Magnetic Level Gauge or LS Cage Level Switch Hazardous area rating: FM approved; CSA and ATEX Certified Enclosure: stainless steel, dual compartment, hermetically sealed, explosion-proof; NEMA 4x/IP56; ½" FNPT Switching mechanism: cam driven, snap-action; AC: 10 amp DC: 2.6 amp; min process temp -320°F (-195°C) with option and max process temp 300°F (149°C), 1000°F (538°C) with IP option; 15/16", DPDT For high-temperature, vibration and high-corrosive applications 		

Product		Features		
	MT5000/MT5100 Guided Wave Radar Transmitters	 Radar signals travel along the waveguide - eliminates false echoes High signal strength with low power consumption The MT5000 provides reliable level measurement over varied process conditions. Distance 2 to 217 ft. (609 mm to 66.1 m) True level measurement regardless of temperature and pressure changes SIL 2/3 Certified to IEC 61508 		
	AT100 Magnetostrictive Level Transmitters	 High accuracy: .01% of full scale Loop powered to 75 ft. (22.86 m) probe length Total and/or interface level measurement Pressure to 2400 psig (165.47 barg), Std. 1800 psig (124.1 bar) Temperature range: -320 to 800°F (-196 to 427°C) SIL 2/3 Certified to IEC 61508 		
ABB 50-10-10-10-10-10-10-10-10-10-10-10-10-10	KM26 Magnetic Level Gauge with AT200 Magnetostrictive Level Transmitter	 Highly visible level indication with no process fluid in contact with the glass All construction in-house by code certified welders Float designed and weighted for maximum accuracy Transmitter and switch options, which can be installed, adjusted and maintained with no process interruption Safe for corrosive, flammable, toxic, high temperature and high pressure applications SIL 2/3 Certified to IEC 61508 		
ARB	MagWave Dual Chamber Level System	 Redundant level measurement: Guided Wave Radar Transmitters and Magnetostrictive Transmitters with magnetic level gauge Low cost of ownership 5 year warranty Highly visible indication Variety of chamber materials Multiple chamber styles to your custom requirements Pressure to 5000 psi (344 bar) 		

Continuous Level Measurement

Product		Features		
	AT500 Magnetostrictive Level Transmitter	 Can be used in mud pits and other utility applications High resolution 4-20 mA output - no signal conditioner required Zero and span setpoints adjust digitally Pressures to 1800 psig (124.1 barg) Calibrates without opening enclosure Economical measurement solution 		
	AT200 as a Valve Positioner	 High accuracy .01 % of full scale with patented magnetostrictive sensing technology Microprocessor-based Never requires recalibration Field replaceable module 		



Non-Contact Continuous Level Measurement

Product		Features		
	LM80/LM200 Laser Level Transmitters	 The LM80/LM200 lasers are robust laser transmitters that can accurately measure level, distance and position over long ranges in extreme environments. LM80's long range is to 200 ft./60 m LM200's long range is to 500 ft. / 150 m No beam divergence = no false echoes Measure surface at any angle with narrow beam 		

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