

Clamp On Gas Meters for Dewatering in Spain and Egypt

Abstract

RS Hydro was asked by a company in Spain to find a permanent meter to measure the pressure of compressed air being pumped through a pipe.

Equipment Used

The Panametrics GC868 Clamp on Gas Flow Meter.

Flow - Level - Water Quality
Groundwater - Meteorology - Telemetry



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Background

RS Hydro was asked by a company in Spain to find a permanent meter to measure the pressure of compressed air being pumped through a pipe. The flow meters will be part of a dewatering project for a natural gas pipeline which has just been built.

The Specifications

- 8 and 10" schedule 80 and 160 pipelines
- Natural gas pipeline of 100km long
- Pipeline reaches depths of 1000m below the sea
- Pig Masses will be used to dewater the pipe



fig1. PT878 being used to verify the CTF878

The Solution

RS Hydro installed three dual channel GC868s to measure the pressures. The GC868s will be used in May/June 2008 for the 100km pipeline pigging exercise. The pipeline reaches depths of 1000km below sea level. Pig masses will be launched from Almeria, Spain and pushed through the pipes with compressed air from multiple high output compressors providing pressures of between 34 and 275 bar. As the pigs are pushed through the pipe the water pushed out. The GC868s will monitor the speed and location of the pigs by monitoring the velocity, temperature, pressure and flow rate of the compressed air. The flow meters

will provide analogue outputs for flows up to 3000 SCM/hr.

The data being monitored will allow the engineers on site to know where in the pipeline the pig masses are, and to check that the pressure of the compressed air is great enough to move the pig with out getting stuck. At the end of this process all water should have been removed from the pipeline.

Other Dewatering Projects

RS Hydro have also been contracted to install a similar system for a pipeline dewatering scheme off the Egyptian coast. In this case the pressure is likely to be less than 15 bar and will involve the use of a CTF878 on a 20" pipeline.

RS Hydro are specialists in clamp on gas flow measurement for a multitude of applications and industries. Most engineers are not even aware that these technologies exist. Clamp on flow meters can be used to measure air, nitrogen, natural gas, argon, aggressive or corrosive gases in plastic or metal pipework.



fig2. The natural gas pipeline in Spain.