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Titan Enterprises Continues to Break Ground in the Mining Industry

For over 25 years,

Titan Enterprises' [Oval Gear flowmeters](#) have been incorporated into heavy drilling and rock crushing machinery for use in the Mining and Aggregate industry. Due to their rugged design, these meters provide reliable performance in extreme conditions.

Initially working with JBC,

Titan developed a bi-directional / dual flow Oval Gear flow meter that was fitted to drilling rigs in salt mines. These underground drill rigs are machines designed for drilling in the rock face as well as in concrete and ground. The relatively small flow



measuring devices are incorporated into these vast machines to monitor the flow of oil and additives.

Large rock crushers

and other equipment are used to break and remove rocks of various hardness and toughness, to extract the mineral-rich material, and process the ore by extracting the desired compounds and metals. McCloskey International is one such heavy machinery manufacturer specialising in crushers and mining processing equipment.



McCloskey International

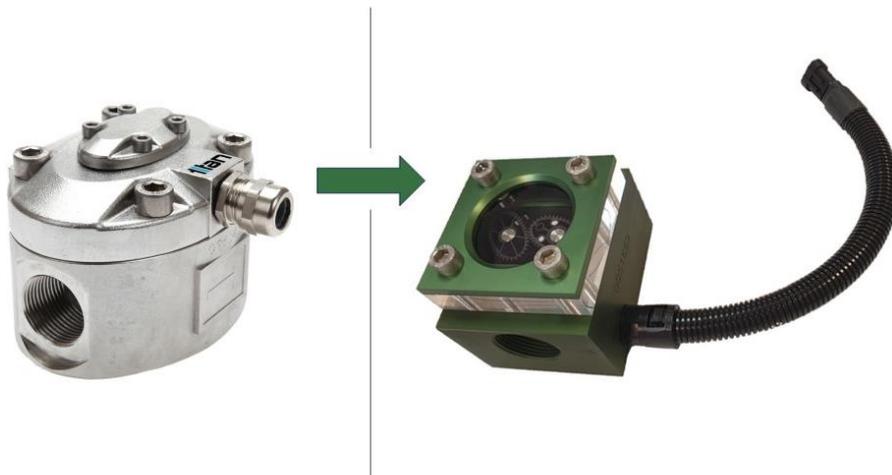
approached Titan to see if we could make a flowmeter able to monitor the oil flow on a rock crushing machine. The requirements were for a much bigger thread than would normally be used for the specified flow range. They also wanted to see the meter in operation. The central 'drum' of the crusher which does the hard work is basically a huge cylinder rotating on large bearings. These bearings had to withstand the side load induced during the rock crushing so the oil flow and pressure are critical. It was vital that the flowmeter did not impede this flow and so had to have a low pressure drop even at full flow with cold, highly viscous oil.

Titan's OG5 model

fitted the flow requirements but the standard unit's 1" BSP threads were considered too small, risking a restricted oil flow.

We set about redesigning the OG5 model in aluminium

and with 1¼" connections to reduce the pressure drop at minimum temperature and maximum flow. We installed an acrylic cap, a see-through cover so that the operator could visually verify oil flow. A cable loom was fitted so that the flowmeter could be plugged directly into the customer's wiring loom. The final touch was to anodise the body of the meter to match the colour of the machines they were being fitted into, making these meters a very distinct [OEM product](#). The resulting flow device has proved to be very reliable and to date over 600 of these specialised flowmeters have been installed in the McCloskey family of rock crushers over the last 10 years.



As well as adapting designs

to meet customers' specific process needs, such as high-pressure requirements and to aid chemical compatibility, Titan's [standard OG5 flowmeter](#) has since been redesigned. These compact rugged positive displacement flowmeters incorporate a new machined stainless-steel, high viscosity design for both the body and caps, which has also enabled an increase in the standard design pressure for these units.



Titan's OG Series of flow meters

are designed to give reliable, high performance across a wide range of applications. Almost immune from the effects of varying liquid viscosity, density and temperature, the measurement performance of oval gear flowmeters improves as liquid viscosity increases.

Visit Titan Enterprises'

website for further information on flow measurement or to discuss specific OEM applications, please contact [Titan Enterprises](http://TitanEnterprises.com) on +44 (0)1935 812790 or email sales@flowmeters.co.uk.

Titan Enterprises Ltd

Drawing upon over 40-years of flowmeter innovation - Titan Enterprises Ltd is a leading manufacturer of high-performance flow measurement solutions, including the Atrato[®] ultrasonic flowmeter, Oval Gear flowmeters, low flow Turbine flow meters and a flow instrument range. Titan's company philosophy of "pushing the envelope by trying to do things a little different and better" has resulted in sales of over 2 million flowmeters and components

into 50 countries worldwide and a repeat purchase percentage of 95%. All flow meters produced by Titan Enterprises are designed and manufactured to ISO9001 and calibrated to an uncertainty of $\pm 0.25\%$.

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