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Excellence in Television Technology www.industrial-tv.com

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Video Millscope:

The Video Millscope is an instrument designed for the easy alignment of rolls and guides in rod and bar mills. The system is portable and provides a quick, easy and accurate method of checking and setting the alignment of the mill. The system design eliminates viewing and parallax errors associated with some other alignment devices, and provides the operator with a large, easily-viewed image of the mill rolls and guides.

As there are many variations of rolling mill layout, individual versions of Millscope will differ in configuration, but the operating principle remains the same for all.

A miniature video camera is mounted in a housing that fits in the mill, normally replacing an exit guide, and views the rolls and entry guide, looking along the mill axis and able to move along the pass line to view through the rolls. It is a fundamental of the system that the mounting surface is used as a datum reference, and so this position must be checked for accuracy before the system is first deployed on that mill.

The operator views the picture from the camera on a monitor screen contained in the Millscope case. This picture shows the relative positions of the guide and rolls with reference to the axis of the mill pass line. A cross hair graticule on the picture shows the axis of the mill, and any displacement of rolls or guide from the correct point is visible on the picture. A secondary graticule, which is of variable size but axis-symmetrical with the cross hair, is adjusted so that all four corners coincide with the pass profile. If this is not possible, the mill is adjusted until a fit is achieved. When this condition is achieved, the rolls and guides are exactly symmetrical with the mill pass.

Achievable accuracy will depend upon the mill and section being rolled, but for smaller sizes, 0,1 mm should be possible.

The complete system is contained in a robust plastic case, size will depend on the mill and sections rolled. Larger sizes are fitted with wheels, smaller units are easily portable.

Millscope is one of a range of innovative video instrumentation and observation systems from Industrial Television Ltd.

Because of our policy of continuous product development, specification may change without notice.