

AUTOMATED CIRCUMFERENTIAL PIPE SCANNING SYSTEM

ABSTRACT

The present disclosure provide pipe scanning systems suitable for performing integrity and reliability inspection of pipelines, including insulated and non-insulated pipelines. The pipe scanning system may include a track disposed about a surface of the pipeline (e.g., on top of the insulation for insulated pipelines or on top of the pipe for non-insulated pipelines) and a scanning device mounted on the track via a drive carriage. The drive carriage includes components to facilitate movement of the drive carriage and the scanning device along the track such that the scanning device travels about the circumference of the pipeline. The scanning device includes an x-ray emitter and a digital x-ray detector that may capture media content indicative of a scanned section of the pipeline (e.g., a 360° circumferential scan), and the media content may be analyzed to detect the presence of one or more defects, such as corrosion under insulation (CUI).

FIG. 2A