

## **ABSTRACT**

A rotary compressor, comprising: a housing (12), comprising a lubricant oil storage part for containing lubricating oil; a compression mechanism (20) disposed in the housing (12); a driving mechanism (30) driving the compression mechanism (20), the driving mechanism (30) comprising a rotation shaft (50), through-holes (54, 56) extending along the axial direction of the rotating shaft (50) are disposed inside the rotating shaft (50), and the rotation shaft (50) is in fluid connection with the lubricating oil storage part via the through-holes (54, 56); and an oil level sensor (120) in fluid connection with the through-holes (54, 56) inside the rotation shaft (50) via a pressurized collection channel (110). Also disclosed is a rotation mechanism, comprising an oil level sensor (120) in fluid connection with the through-holes (54, 56) inside the rotation shaft (50) via the pressurized collection channel (110). Accurate and reliable detection of the lubricating oil in a compressor can be done using the pressurized collection channel and the oil level sensor, thus greatly saving cost and improving compressor reliability.

**(Fig 1)**

37. The rotary machine according to Claim 35, further comprising a pressure picker disposed between the rotary shaft and the oil level sensor,

wherein the pressure picking passage comprises a pressure picking hole extending through a side wall of the rotary shaft and in fluid communication with the through hole in the rotary shaft, a circumferential oil groove formed on the rotary shaft or the pressure picker and in fluid communication with the pressure picking hole, and a communicating channel extending through the pressure picker and in fluid communication with the circumferential oil groove and the oil level sensor.

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