

Title (en)

SYSTEM AND METHOD OF DETERMINING TOP-DEAD-CENTER (TDC) OF RECIPROCATING COMPRESSOR

Title (de)

SYSTEM UND VERFAHREN ZUR BESTIMMUNG DES OBEREN TOTPUNKTES EINES HUBKOLBENVERDICHTERS

Title (fr)

SYSTÈME ET PROCÉDÉ PERMETTANT DE DÉTERMINER LE POINT MORT HAUT (PMH) DE COMPRESSEUR ALTERNATIF

Publication

EP 3236072 B1 20201104 (EN)

Application

EP 16199469 A 20161118

Priority

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Abstract (en)

[origin: EP3236072A1] An apparatus for determining a top-dead-center (TDC) of a reciprocating compressor (14) includes: a pressure transducer (17) configured to measure pressure fluctuations inside a compressor cylinder (15) and convert the pressure fluctuations into an asynchronous waveform; and at least one computing device (20) operably connected with the pressure transducer (17). The at least one computing device (20) is configured to: extract a data set representing piston angles over a single revolution of a piston (16) within the compressor cylinder (15) from the asynchronous waveform; evaluate a property corresponding to the measured pressure at each piston angle of the revolution data set; determine whether each piston angle of the revolution data set is an invalid piston angle that does not correspond to a TDC position of the piston based at least in part on a comparison of the evaluated property from the respective piston angle to a respective threshold; remove data representing invalid piston angles from the revolution data set to form a refined data set; determine an average piston angle for the single revolution from the refined data set; identify the average piston angle representing a data value of the refined data set as the TDC position of the piston; and adjust the refined data set to identify a TDC position of the piston to be a first data value in the refined data set.

IPC 8 full level

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CPC (source: EP)

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