DESIGN, MANUFACTURE AND TESTING OF A HIGH SPEED OIL FREE INTEGRATED MOTOR COMPRESSOR SUITABLE FOR UNMANNED / SUBSEA APPLICATIONS

U. LAUBER¹ P. ORTMANN² G. KLEYNHANS³

Abstract: Based on the existing high-speed oil-free integrated motor-compressor technology MAN TURBO outlined a programme to further develop and qualify the product for unmanned/subsea, wet/sour gas applications. As an important subject of the development, the motor part has been identified: Make the motor robust and improve the wet/sour gas acceptance of the electrical components. This paper explains the process of engineering and manufacturing of such a motor compressor on basis of an in house development programme. The prototype testing has already been executed and the paper will present the test results showing that the requirements have been met or even have been exceeded.

Key words: highspeed motors, integrated motor compressor, subsea compression.

¹ Head of Division Engineering & Development Compressors; MAN Turbo AG Switzerland.

² Manager Product Development MAN Turbo AG Switzerland.

³ Senior Research Engineer, MAN Turbo AG Switzerland.