Papers on twin-screw air compressors

Abstract: The oil-free dry air compressor plays a crucial role in the fuel cell system, particularly in commercial buses where twin-screw air compressors have proven effective. A ...

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Due to the growing need for the compressed air of higher quality, the water-lubricated twin-screw compressor with water as the only liquid in the compressor has drawn ...

The profile of twin screw air compressor determines the performance of air compressor. In this paper, a 35-tooth profile is designed, which has a high area utilization ...

Explore the working principle of twin-screw compressors. Learn how rotary screw air compressors work and discover their reliability in various ...

For the problems of high noise and low efficiency of twin-screw air compressor, the mutual coupling effect of noise and structure for the twin-screw air compressor is studied by using ...

The paper presents the vibrational behaviour of a twin-screw compressor at various functioning regimes. The speed is varied by means of a 250 kW electric driving motor, via a frequency ...

Part 1 of this paper describes the origins, principal developments, characteristics, applications and current competitive position of the twin helical screw compressor. It is now ...

Twin screw air compressor will be widely used in hydrogen fuel cell commercial vehicle because of its high efficiency and strong adaptability, but its noise issue isn& #8217;t ...

Rotary-screw air compressor internal view A rotary-screw compressor is a type of gas compressor, such as an air compressor, that uses a rotary-type positive-displacement ...

In this paper, a mathematical model of working process including detailed leakage and heat exchange models is constructed for this purpose, and the calculated results are ...

Twin-screw air compressors are widely used in the industrial field by virtue of their stable performance, high performance-price ratio, and large rotational speed. The working principle of ...

In this regard, the paper presents the results of developing a scheme for continuous monitoring of the technical

condition of screw compressor units.

A predictive maintenance module for oil-injected twin screw compressors is proposed in the present paper. Oil-injected twin screw compressors are widely used in the pneumatic drive ...

Abstract The current paper presents the results of the experimental analysis to assess and optimize the twin-screw compressor"s efficiency by varying the volume ratio.

This paper presents different means for variable built-in volume ratio and capacity control for the twin-screw refri geration compressor. Sophisticated methods for such controls are mostly ...

Rotary twin screw compressor are widely used in the refrigeration, gas processing and energy industries and their application are diverse. Flow ...

Abstract Oil injected twin-screw compressors are widely used for medium pressure applications in many industries. Low cost air compressors can be adopted for compression of helium and ...

ABSTRACI" The geometric characteristics of twin screw efficiency. In the compressors use of greatly computer effect their modeling and performance and compressor simulation ...

Compressors thus designed have higher delivery rates and better efficiencies than those using more well known profiles. Some optimization issues of the rotor profile and compressor ports ...

Designing twin-screw compressors to safely operate at higher than normal temperatures poses a challenge as the compressor must accommodate larger ...

The technology of twin-screw steam compressor is mostly extended from oil-free twin-screw air compressor and process gas compressor. The sealing types of these two compressors are ...

Maintaining the operational efficiency and reliability of any industrial system is mandatory to minimize downtime and prevent failures. For this purpose, forecasting the ...

Originality/value The lubrication characteristics of the water-lubricated journal bearing in twin-screw air compressor are calculated considering surface roughness and ...

"In 2010 the International Compressor Engineering Conference at Purdue celebrated its 20th gathering. Conference highlights include the presentation of 98 papers in 19 different sessions, ...

TL;DR: In this paper, a thermodynamic model of the working process of water-injection twin screw compressor was established based on the equations of conservation of mass and energy, and ...

Considering the lack of study on the screw air compressor under unload conditions, a mathematical model for describing the working process inside twin screw air compressors ...

To study the performance and estimate the oscillating bearing loads of a twin screw air compressor, a theoretical model is proposed in this paper. Based on the model, a computer ...

Request PDF | On May 22, 2024, Silvia Maria Zanoli and others published Predictive Maintenance in Twin Screw Air Compressors through Unsupervised Learning | Find, read and ...

In this paper, an oil-injected, twin-screw air compressor used for a 75 kW input power is experimentally investigated to understand the effect of oil injection flow rate on the ...

The present paper proposes a predictive maintenance application to twin screw air compressors. An experimental setup was designed to acquire compressor operation data under different ...

Designing twin-screw compressors to safely operate at higher than normal temperatures poses a challenge as the compressor must accommodate larger peak thermal distortions while ...

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