Kobe steel compressed air energy storage

A compressed air energy storage power generation device 2 includes a compressor, a pressure accumulator tank, and an expander. The compressor compresses air by being driven with renewable energ ... Kabushiki Kaisha Kobe Seiko Sho (Kobe Steel, Ltd.) (Hyogo, JP) International Classes: F01K27/02; F01D15/10; F02C1/05; F02C6/16; F28D20/00; H02K7/14 ...

The motor is driven by input power generated using renewable energy. The compressor is mechanically connected to the motor and compresses air. The pressure accumulation tank accumulates the compressed air compressed by the compressor. The expander is driven by the compressed air supplied from the pressure accumulation tank.

U.S. patent number 10,480,410 [Application Number 15/574,453] was granted by the patent office on 2019-11-19 for compressed air energy storage and power generation method and compressed air energy storage and power generation device. This patent grant is currently assigned to Kobe Steel, Ltd.. The grantee listed for this patent is Kobe Steel, Ltd..

A compressed air energy storage and power generation device 2 comprises a compressor 8, a pressure accumulation tank 12, and an expander 14. The compressor 8 is two-stage, is driven by a motor 44 using renewable energy, and compresses air. ... KOBE STEEL LTD (JP) International Classes: F02C6/16; F02C1/04; F02C6/00; H02J15/00. View Patent Images

EP3 431 737A1 2 5 10 15 20 25 30 35 40 45 50 55 Description TECHNICAL FIELD [0001] The present invention relates to a compressed air energy storage power generation apparatus. BACKGROUND ART [0002] In power generation, such as wind power gen- eration and solar power generation, in which renewable

Compressed Air storage has been gaining investment and looking at the patent databases, Kobe Steel and General Electric lead the innovation leader board in terms of patent applications filed. The number of ...

In a compressed air energy storage and power generation device, a compressed air ... Kabushiki Kaisha Kobe Seiko Sho (Kobe Steel, Ltd.) (Hyogo, JP) International Classes: F02C1/05; F02C6/16; F02C9/24; H02J15/00. View Patent Images: Download PDF 20180128167

To enhance the efficiency and reduce the fossil fuels, researchers have proposed various CAES systems,such as the adiabatic compressed air energy storage (A-CAES) [7], isothermal compressed air energy storage (I-CAES) [8], and supercritical compressed air energy storage (SC-CAES) [9]. Among these CAES systems, A-CAES has attracted much ...

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Cold Work vs Hot Work in Steel: Understanding the Differences; Solving Food Storage Challenges with 3D Scanners; Lubricants Improve Efficiency and Longevity of Wind Turbines; ... Compressed Air Energy Storage: Global Opportunity Analysis and Industry Forecast, 2021 - 2023. [Online]

This compressed air energy storage generator 1 is provided with a motor 13, a compressor 10, an accumulator tank 11, an expander 12, a generator 15, an inverter 14 for a motor, an inverter 16 for a generator, a power supply command receiving unit 31, a discharge command receiving unit 32, and a control device 30. The control device 30 comprises: a power supply determination ...

A compressed air energy storage power generation apparatus includes a power demand receiving unit that receives a power demand value of a consumer facility. The apparatus includes a ... KABUSHIKI KAISHA KOBE SEIKO SHO (KOBE STEEL, LTD.) (Hyogo, JP) International Classes: F02C6/16; F02C1/02; H02J7/34; H02J15/00. View Patent Images: ...

This CAES generator (1) is provided with multiple motors (13), multiple compressors (10), an accumulator tank (11), expanders (12), generators (15), inverters (14) for a motor which change the rotation speed of the motor, a power supply command receiving unit (31) which, before the supply of input power, receives the input power as a power supply command value, and a ...

CAES, a long-duration energy storage technology, is a key technology that can eliminate the intermittence and fluctuation in renewable energy systems used for generating electric power, which is expected to accelerate renewable energy penetration [7], [11], [12], [13], [14].The concept of CAES is derived from the gas-turbine cycle, in which the compressor ...

COMPRESSED AIR ENERGY STORAGE POWER GENERATION APPARATUS AND COMPRESSED AIR ENERGY STORAGE POWER GENERATION METHOD . United States Patent Application 20180283275 . Kind Code: ... Kabushiki Kaisha Kobe Seiko Sho (Kobe Steel, Ltd.) (Hyogo, JP) International Classes: F02C6/16; F24F5/00; H02K7/18. View Patent Images: ...

COMPRESSED AIR ENERGY STORAGE POWER GENERATION DEVICE . United States Patent Application 20200340399 . Kind Code: A1 . Abstract: In a main flow passage, a first heat exchanger, a first heat storage unit, a second heat exchanger, and a second heat storage unit are connected by a heating medium flow passage. ... KABUSHIKI KAISHA KOBE SEIKO SHO ...

A compressed air energy storage system generates power using stored electric power in the form of compressed air and heat. This type of storage system is constructed from general-purpose machines, making it long-lasting and ...

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