

Analisa Dan Strategi Suku Cadang Untuk Kategori Critical/Insurance Pada Gas Turbine Compressor = Spare Parts Analysis And Strategy For Critical/Insurance Category On Gas Turbine Compressor

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Abstrak

Gas Turbine Compressor merupakan peralatan kritikal yang berfungsi untuk mengalirkan gas melalui jaringan pipa dari lokasi produksi ke lokasi pengguna gas tersebut. Kegiatan preventive maintenance dan corrective maintenance untuk keandalan dari peralatan tersebut, mempertimbangkan strategi manajemen suku cadang terutama suku cadang critical/insurance. Diperlukan analisa suku cadang dengan kategori critical/insurance pada gas turbine compressor GT-2600 di PT X berdasarkan data histori work order yang didapat dari CMMS (Computer Maintenance Management System) di PT X, dimana terdapat 82 items KIMAP (Material Code) yang merupakan kategori critical/insurance yang terdiri dari 42 items KIMAP yang dikategorikan critical/insurance sedangkan 40 items KIMAP lainnya bisa di- take down dari kategori critical/insurance, dengan metode dan acuan flow chart ROP Insurance Parts Management Procedure, yang sudah melewati beberapa tahapan yaitu reliability study, failure management study sesuai data referensi dari OREDA, dan FMEA study yang tidak dibahas dalam penelitian ini. Dari 40 items yang diajukan untuk di take-down, dapat mengurangi holding cost untuk material inventory dari material dead stock tersebut sebesar USD 128.503,13. Analisa yang didapatkan dari Preventive Maintenance, Corrective Action, dan Predictive Maintenance, dan redundancy system dengan merujuk PMR dan FMEA pada gas turbine compressor sehingga didapatkan optimalisasi suku untuk menghindari terjadinya unplanned shutdown.

.....Gas Turbine Compressor is a critical equipment that functions to deliver gas through pipelines from the production location to the gas user location. Preventive maintenance and corrective maintenance activities for the reliability of the equipment, considering spare parts management strategies, especially critical / insurance parts. It is necessary to analyse spare parts with critical/insurance categories on the GT-2600 gas turbine compressor at PT X based on historical work order data obtained from CMMS (Computer Maintenance Managemeny System) at PT X, where there are 82 KIMAP (Material Code) items which are critical/insurance categories consisting of 42 KIMAP items categorised as critical/insurance while the other 40 KIMAP items can be taken down from the critical/insurance category, with reference to the ROP Insurance Parts Management Procedure flow chart, which has gone through several stages, namely reliability study, failure management study according to reference data from OREDA, and FMEA study which is not discussed in this study. Of the 40 items proposed to be taken down, it can reduce the holding cost for the material inventory of the dead stock material by USD 128,503.13. Analysis obtained from Preventive Maintenance, Corrective Action, and Predictive Maintenance, and redundancy systems with reference to PMR (Planned Maintenance Routine) and FMEA (Failure Mode Effect and Analysis) on the gas turbine compressor so as to obtain optimisation of spare parts to avoid unplanned shutdown.