Metode Analitycal Hierarchy Process untuk Penentuan Lembaga Enjiniring dalam rangka Penilaian Sisa Umur Layan Peralatan dan Instalasi Minyak dn Gas Bumi di Indonesia = Analytical Hierarchy Process Method to Engineering Companies Selection for Remaining Life Assessment of Oil and Gas Equipment and Installation in Indonesia.

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Abstrak

Industri minyak dan gas memiliki peran penting dalam penerimaan pendapatan negara dan ketahanan energi nasional. Peralatan dan instalasi adalah komponen utama dalam proses pengolahan minyak dan gas. Jaminan keselamatan, keamanan dan keandalan peralatan dan istalasi harus dijaga agar terwujud suasana aman, efektifitas, efisiensi dan keandalan. Inspeksi keselamatan peralatan dan instalasi dapat dilakukan secara berkala berdasarkan periode tertentu atau berdasarkan hasil analisis risiko. Peraturan ESDM No. 18 tahun 2018 tentang Pemeriksaan Keselamatan Instalasi dan Peralatan pada Kegiatan UsahaMinyak dan Gas Bumi, menyatakan bahwa peralatan dan instalasi yang telah melampaui rentang masa desain, masih dapat digunakan setelah dilakukan evaluasi penilaian sisa umur layan dan dinyatakan masih dapat diperpanjang umur masa pemakaiannya. Evaluasi penilaian sisa umur layan dapat dilakukan oleh lembaga enjinering yang telah memiliki ijin dari Direktur Jenderal Minyak dan Gas Bumi. Penelitian ini menggunakan metode Analitical Hierarchy Process untuk menentukan lembaga enjinering yang akan dipilih untuk melakukan pekerjaan penilaian sisa umur layan peralatan dan instalasi minyak dan gas. Kriteria dan sub-kriteria diambil dari referensi jurnal kemudian divalidasi oleh para ahli dari perusahaan jasa inspeksi, asosiasi, akademisi dan perusahaan minyak dan gas.

.....Oil and gas industry has an important role inreceiving state revenues andnational energy endurance. Equipment and installation are the main components of the oil and gas processing. Safety, security and reliability of equipment and installation guarantees must be maintained to realize safe, effective, efficient and reliable. Safety inspection of operating equipment and installations can be conducted periodically based on certain period or the results of a risk analysis. ESDM Regulation No. 18 of 2018 concerning Safety Inspection of Installation and Equipment in Oil and Gas Business Activities, state that equipment and installations that have extended the design life span can still be used after evaluating the remaining life assessment and are declared to have extended service life. The evaluation of the remaining life assessment can be carried out by the Engineering copanies which already has a permit form from the Director General of Oil and Gas. This research usess the Analytical Hierarchy Process method to determine which engineering companies will be selected to carry out work the remaining life assessment of oil and gas equipment and installation. Criteria and sub-criteria are taken from journal references which are then validated by experts from inspection service companies, associations, acdemics and oil and gas companies.