ME24_16 – Structural Approach to Maximize Process System Availability for Oil and Gas Facilities Powered by Secondary Selective Substations

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Abstract - In most of the cases, process systems are supposed to operate continuously with no interruption. Thus, industry professionals tend to invest in applying the most reliable power network configurations, such as secondary selective systems. However, this huge investment can be easily downgraded with wrong process load distribution. Proper load distribution is a joint effort between electrical and process disciplines, which highlight the need for tool that bridges the gap between the two disciplines. This paper aims to achieve that through providing a structural approach to distribute process and electrical load and achieve the maximum availability utilizing reliability engineering analysis tools. It also sheds the light on number of equipment that shall be noted during load distribution as they can be easily missed and result in severe availability drop.