788 – Design good practices to reduce LV switchgear footprint, cost and CO2 footprint

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Abstract: Optimization for electrical equipment has been a constant interest for O&G operators, as well as to EPCs. A special attention shall be paid to LV switchgear as end users and designers can select many alternatives, which may significantly impact the outcome. This paper will discuss some key design choices and present good practices to reduce footprint and costs as well as reduce CO2 footprint. It will focus on circuit breaker/fuses choice impacts at switchboard level, complementing the paper presented at PCIC Europe 2013, nominal voltage selection and some other design proposals enabling above optimizations.

Circuit breaker/fuses choice: fuses are often perceived as a cheaper alternative to circuit breakers.That could be challenged from a Totex perspective, but the experience gained in supporting end-user projects clearly shows the smaller MCC footprint, leading to up to 10% cost reduction, not to mention lower electrical rooms costs and reduced GHG emissions.

Nominal voltage selection: combined with appropriate product selection, shifting from 400V to 690V nominal voltage can bring significant optimizations, as demonstrated by relevant case studies.