



**ROYAL HASKONING DHV**

**CASE STUDY 15:  
ROYAL HASKONING DHV  
ETAP POWER SYSTEM STUDIES**

**Client:** Royal Haskoning DHV  
**Industry:** Marine / Industrial  
**Plant Type:** Shipyard  
**Project:** System Studies  
**Contract:** Lump Sum  
**Date:** 2017

SPE was contracted by Royal Haskoning DHV to carry out a series of power system studies using ETAP for a large shipbuilding yard located in the Middle East.

SPE's scope included creating a full ETAP model of the whole site, consisting of 8 major load areas, each containing multiple local substations. The total number of substations on the site was in excess of 150, and had a maximum power demand of over 120MW, creating an exceptionally large and complex site.

SPE carried out a series of loadflow, short circuit, motor starting and arc flash studies for the whole site considering multiple operating configurations and contingencies. The final study report was nearly 90 pages long and provided extensive in-depth explanation and detail of the studies carried out.

In addition to the base scope SPE, also provided various ad-hoc consultancy advice on the use of soft starters, fault level mitigation techniques and guidance on the interface and operating conditions with the Utility company.

**“SPE was appointed to undertake a significant ETAP study for a site containing over 150 substations and a total power demand in excess of 120MW.”**

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