ABB has reduced the power requirements needed to operate Peterhead Harbour’s ship-lifting facility – Syncrolift, by installing power factor correction (PFC) equipment.

The Need
The coastal town of Peterhead, located on the north east coast of Scotland, is a busy harbour primarily used by deep-sea commercial fishing vessels operating in the North Sea. The harbour is the largest employer in the area and plays an important role in the local economy.

It is essential that repairs and routine maintenance can be completed in the shortest time which is why Syncrolift – a ship-lifting and transfer facility was installed. This facility allows vessels to be lifted out of the sea at a constant speed of 300mm per second, and transferred to a dry dock area. Reducing the power requirement needed to operate Syncrolift would offer considerable economic savings for the harbour.

Project details
Peterhead Harbour asked Miami-based Syncrolift to install a 33m x 15.2m wide lifting platform, operated by six identical 540-tonne capacity hoist assemblies. Each hoist contains an AC synchronous induction motor. The Syncrolift provides a total lifting capacity of 2,685 tonnes and has a maximum load of 256 kVA. With ABB’s power factor correction equipment in the power system, the power needed to operate Syncrolift has been reduced to 168 kVA.

Syncrolift’s president, Geoff Stokoe said: “With ABB’s power factor correction system, Syncrolift is the most economical shiplift system in the world.” All future Syncrolifts will be fitted with ABB’s PFC equipment and existing operators will be offered the system.

Customer Verdict
Harbour engineer, David Buchan commented: “ABB’s capacitor bank allows us to operate Syncrolift more economically due to the reduction of power needed to operate the hoists. The financial benefits are significant, particularly now that we are able to handle approximately ten boats each month. Lifting boats out of the water used to take three hours using a graving dock, now it only takes one with Syncrolift.”

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