

Drive & Coupling Solutions

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MagnaDrive Fellside CHP, Sellafield, Cumbria.

Engineers from Fellside CHP contacted MagnaDrive to investigate the possible usage of a 'new' coupling type to resolve major issues they were experiencing on 2 critical pump drives.

Two identical pumps were causing major maintenance problems due mainly to fixed pipe work arrangements. Pressurized water rising from ambient to 350C is pumped around a ring main system. This rise in temperature of around 330C caused the pump body and pipe work to grow and move significantly.



The main result of this excessive movement was manifested in disc coupling degradation. Stainless steel disc pack of the metal membrane type used in this spacer coupling application could not accommodate within their design the large transient misalignments created.

A solutions was put forward to replace the troublesome disc couplings with a Magnetic drive coupling that employs rare earth neodymium boron iron magnets in proximity to pure copper to generate an eddy current field strong enough to link these 350kW motor to their respective pump via a 6mm air gap.

The installation of 2 MagnaDrive FGC couplings to these pumps totally removed vibrations, restoring moments and all forces that had previously lead to the frequent coupling failure. In addition pump downtime through reduced bearing and seal wear was reduced. These coupling have now run for **over 8 years** with zero maintenance or adjustment saving Fellside considerable time and money.

Just one of the many applications solved by MagnaDrive Coupling technology, please see www.magnadrive.com for many more.

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