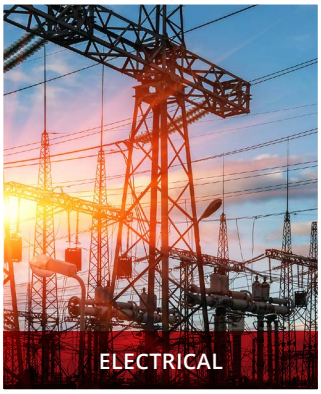
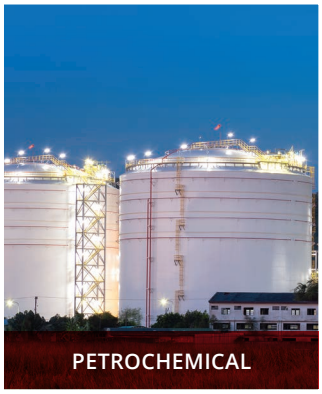
ANODE ENGINEERING

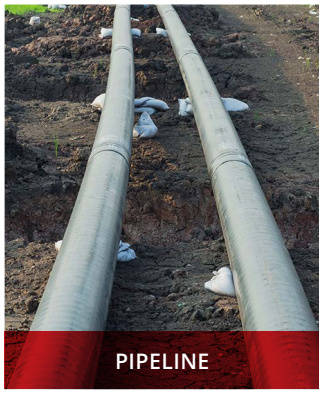
DAIRYLAND ELECTRICAL INDUSTRIES

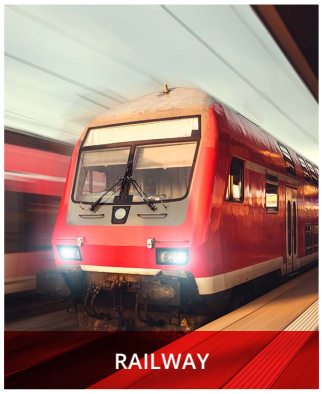
PROTECT ASSETS & PERSONNEL

BLOCKS DC TO REDUCE CATHODIC CORROSION,
WHILE GROUNDING FAULT CURRENT.









SOLID-STATE DECOUPLERS

The decoupler will perform two electrical functions simultaneously.
DC ISOLATION AND AC GROUNDING.

WHY USE DAIRYLAND DECOUPLERS?

- CATHODIC PROTECTION
- AC FAULT PROTECTION
- LIGHTNING PROTECTION
- AC CURRENT MITIGATION

SSD

SOLID-STATE
DECOUPLER

PCR

POLARIZATION CELL
REPLACEMENT

Contact Anode Engineering for further information
1800 446 400 | www.anodeengineering.com

ANODE ENGINEERING

DAIRYLAND ELECTRICAL INDUSTRIES

REDUCE GALVANIC CORROSION

BY ISOLATING YOUR CATHODIC PROTECTION SYSTEM

SSD

SOLID-STATE DECOUPLER

The Solid-State Decoupler (SSD) uses proven, solid-state construction combined with innovative production and packaging techniques, to offer exceptional performance while lowering the cost of applying protection products to the industry. With ratings for AC fault current and lightning, and the ability to pass steady-state AC current, the device outperforms other technologies such as metal oxide varistors, gapped arrestors, and polarization cells.

Now proven over many years, the SSD is the most commonly used Dairyland decoupler in the world.

PCR

POLARIZATION CELL REPLACEMENT

The Polarization Cell Replacement (PCR) is a solid-state device designed to simultaneously provide DC decoupling and AC continuity/grounding when used with cathodically protected structures, such as pipelines, tanks, grounding systems, and cable casings.

Commonly used to decouple electric equipment from grounding systems, for AC Mitigation projects, or other isolation and grounding applications, the PCR provides safety grounding while also isolating your cathodically protected structure, improving CP system performance.

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CATHODIC PROTECTION:

Cathodic Protection (CP) systems are necessary to prevent corrosion of a pipeline or other metallic structures. A CP system provides corrosion protection by applying a low voltage negative DC bias to the structure. Safety grounding systems connected to a structure can short this CP current to ground and may compromise the efficiency of the CP system.

A decoupler functions to isolate or block the flow of DC current to other equipment or grounding materials, eliminating any negative influence on your CP system caused by equipment or grounding materials.

AC FAULT PROTECTION:

Failure of nearby equipment can be a safety hazard and generate a AC fault current. This AC current could transmit through a pipeline, endangering personnel or causing damage. When this occurs, the decoupler instantly conducts fault current to ground, taking the AC current away from the pipeline for immediate protection.

LIGHTNING PROTECTION:

When lightning occurs, it presents a safety hazard to a pipeline and possibly workers. The decoupler works the same way as when protecting AC fault. It channels the high-voltage DC current lightning to ground, safely protecting the pipeline and personnel. After the event, the decoupler automatically switches back to its DC isolation/cathodic protection task.

AC CURRENT MITIGATION:

Pipelines are usually buried along a shared right-of-way with high-voltage power lines, inducing AC current in the pipeline. This is a safety hazard but can also cause corrosion and related issues. Decouplers such as the PCR or SSD are designed to repeatedly conduct induced AC current to ground, mitigating this risk while at the same time isolating your Cathodic Protection system.

In AC mitigation applications, a zinc or copper mitigation wire is laid next to the buried pipeline and is electrically connected to it. The job of the mitigation wire is to safely channel induced AC to ground.

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