

Cathodic Protection and Stray Current Mitigation – Establishing the NZ Electrolysis Committee

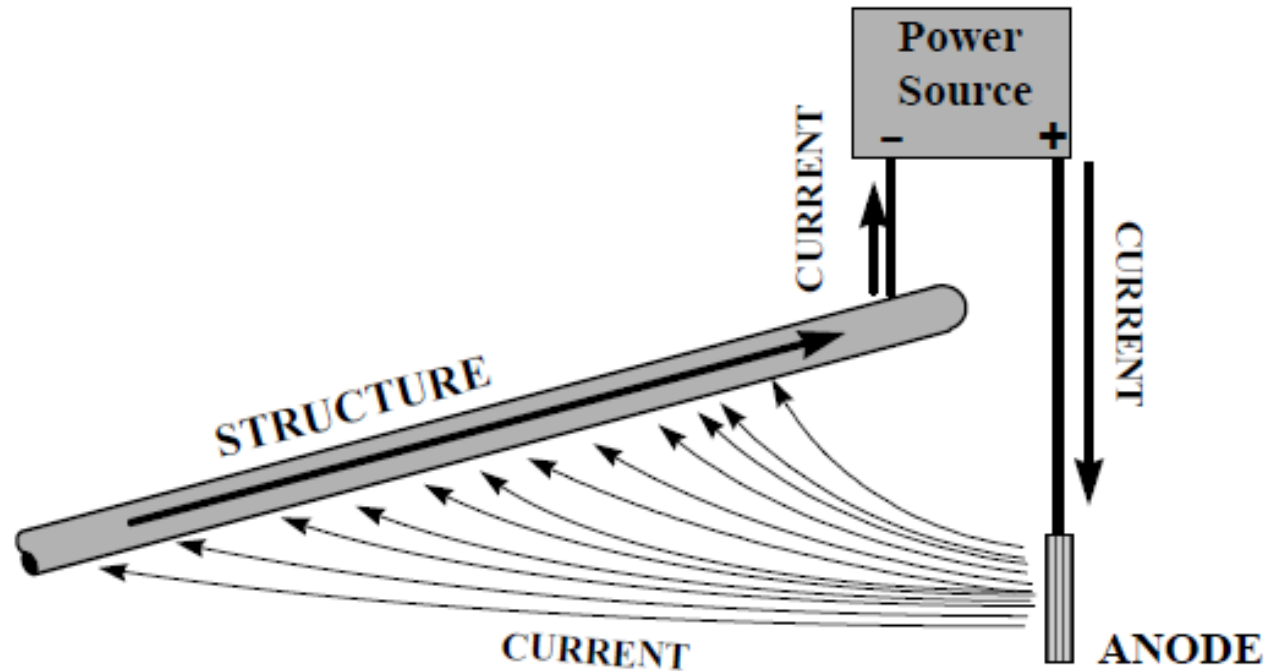
Rene D'Ath
Gas New Zealand Industry Forum
Wairakei 2011

Introduction

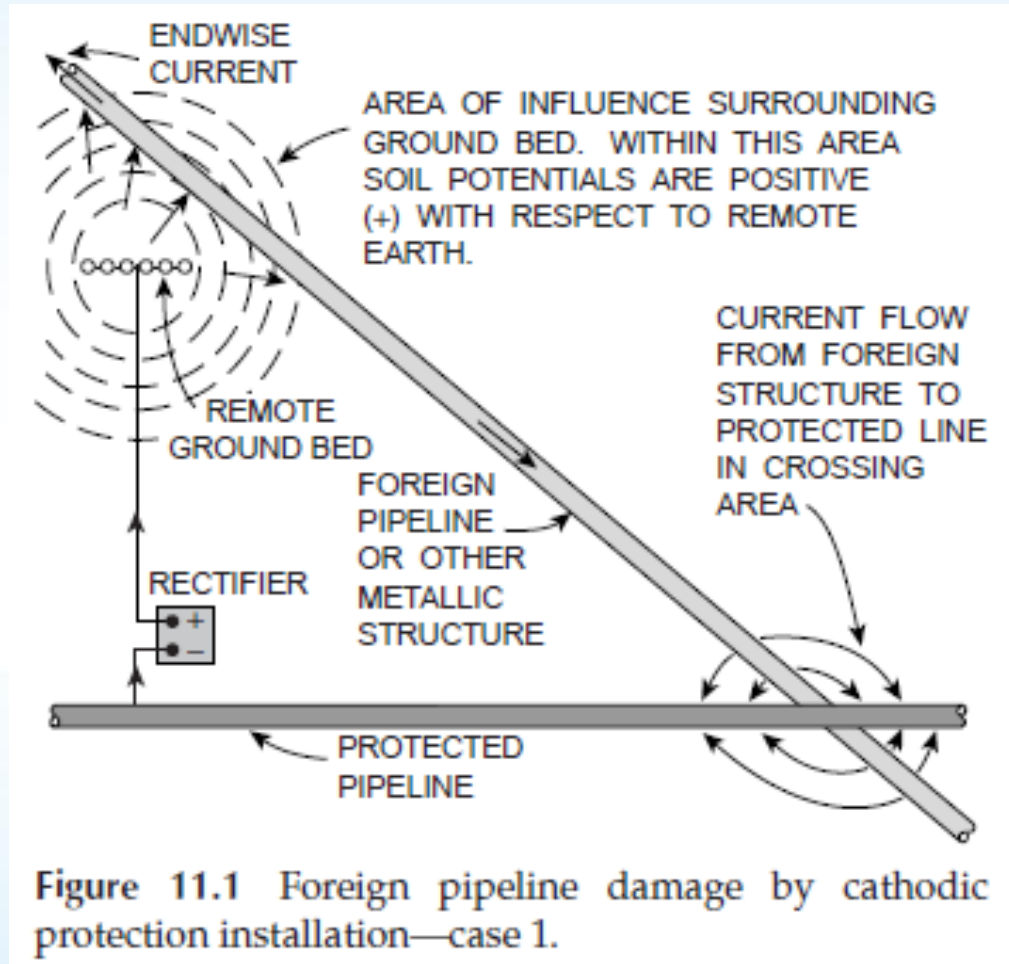
1. Cathodic Protection
2. Stray Current Corrosion
3. Asset Owners
4. Electrolysis Committee
5. Questions (possibly some answers)
6. RWC

Cathodic Protection (CP)

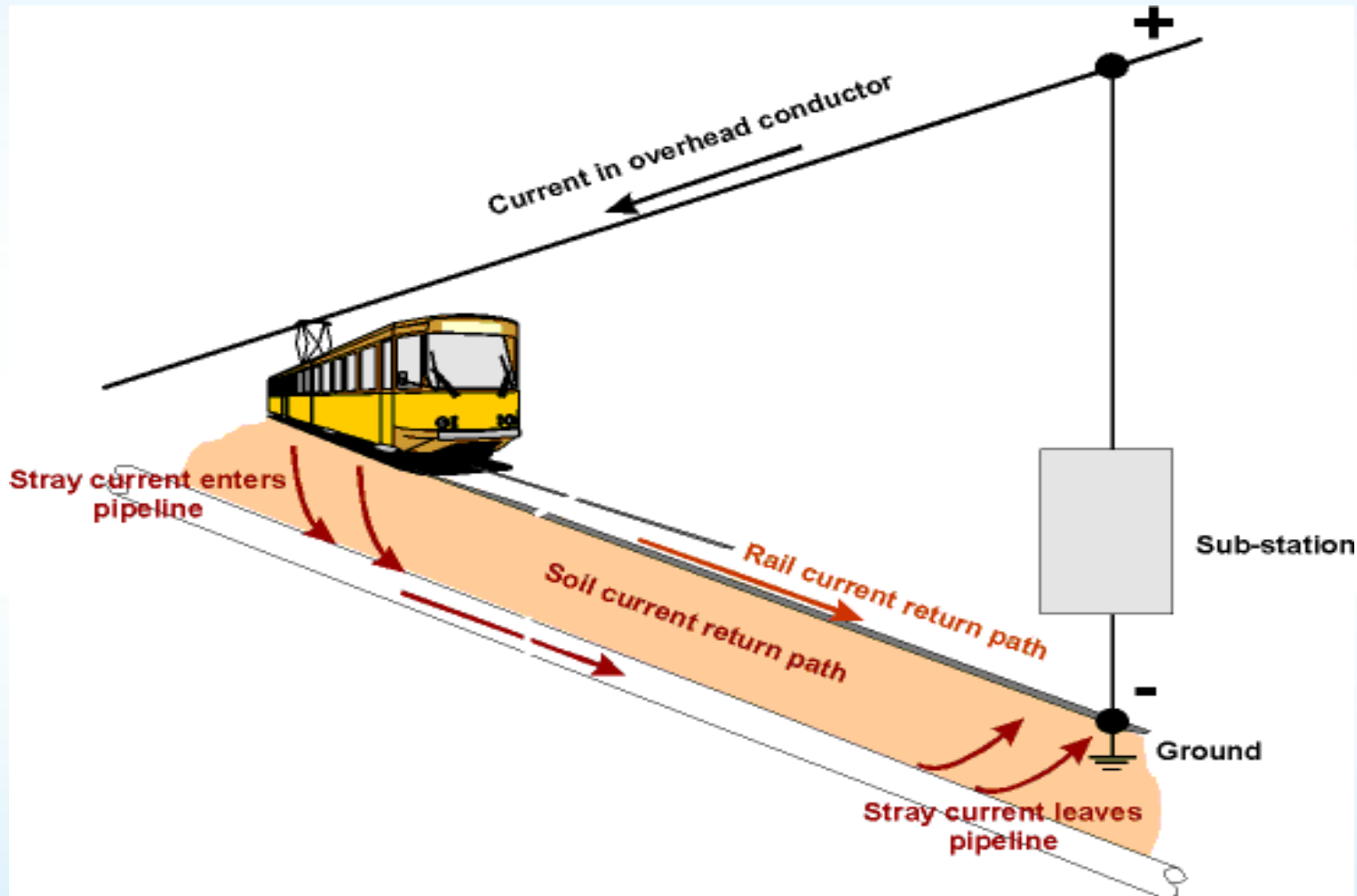
Corrosion prevention technique for buried or immersed structures.



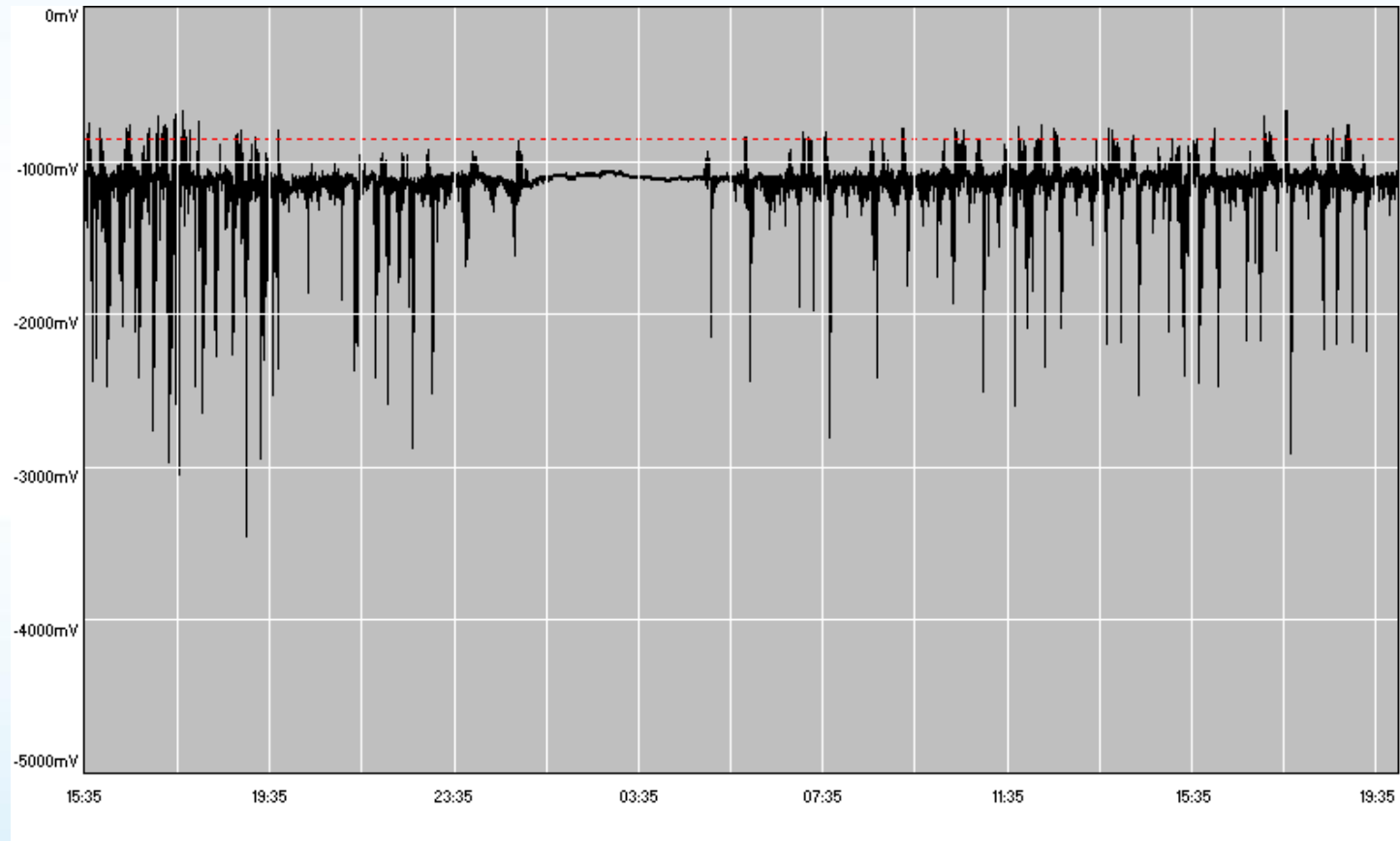
Foreign Pipeline CP Interference



DC Rail System Stray Current



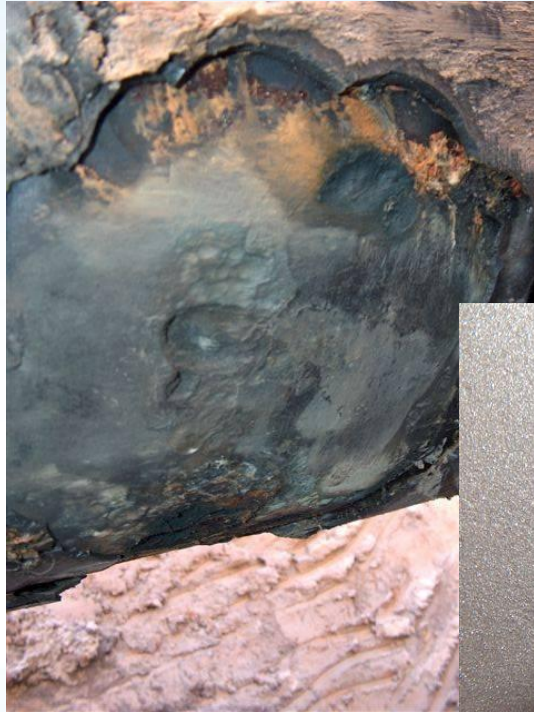
DC Rail System Interference on Pipeline CP





Pipelines

Stray Current Corrosion



Asset Owners – CP Interference

1. Regulated

Oil and Gas
Pressure
Etc, etc.

Typically:

Informed
Qualified
Aware

Consequences:

H&S
Environmental
Reputation
Financial
Loss of supply

2. Unregulated

Water (potable and grey)
Boats
Buildings
Etc, etc.

Often not:

Aware
Informed
Qualified

Consequences:

H&S (some)
Env (some)
Reputation
Financial
Loss of supply



Pipelines

International Practice

1. CP system design and commissioning is controlled
2. CP systems are registered
3. This regulation safeguards asset owners from foreign CP system interference



Pipelines

NZ Electrolysis Committee

1. Currently being established with the support of the ACA
2. Includes asset owners, operators, service providers etc.

Oil and Gas

Water

Rail

Marine





Pipelines

Electrolysis Committee Why?

1. Ensure CP system designs account for foreign assets
2. Ensure CP system designers meet required standards
3. Provide a forum for discussion of issues, through technical meetings, seminars or publications
4. Co-ordinate monitoring and mitigation of stray current
5. Provide a collective means to liaise with companies causing stray current to co-operate and reduce effects

Questions.....

