Name of the Technology: **Smart Coatings of Conducting Polymers for Corrosion Protection**

**Summary:**
Our innovation relates to the preparation of smart coatings of conducting polymers which can be used for preventing corrosion of iron under hostile environmental conditions. The aim of the innovation was to design conducting polymer composites by incorporating filler materials and suitably selecting a medium for polymerization so that the resultant epoxy coatings can be used for prevention of corrosion of iron in saline water conditions.

![Figure 1: Salt spray images of powder coated sample](image)

**Applications:**
- Railway bridges, Sea-link Bridges, Ship Hulls, Undersea oil pipeline, TV & Microwave Transmission Towers, Electricity poles, Iron bars in concrete structures, Under surface of Railway coaches, wagons, car, scooter
Advantages:

How Our Innovation is different from conventional coatings?
* We are designing conjugated polymers which have Smart action and have self healing ability: pin hole/scratch site passivation
* Environmental friendly/based on green technology (free from heavy metal ions and hazardous chromates);
* Long service life ; * Economic feasibility; * Additional antistatic property

Choose the Readiness level of the Technology:

<table>
<thead>
<tr>
<th>Idea</th>
<th>Concept Definition</th>
<th>Proof of Concept</th>
<th>Prototype</th>
<th>Lab Validation</th>
<th>Technology Development</th>
<th>Technology Demonstration</th>
<th>Technology Integrated</th>
<th>Market Launch</th>
</tr>
</thead>
</table>


User Industries:
Paint Industries; AkzoNobel; DOW Chemicals; Autonomic Materials