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Role of Material / Corrosion Engineers in Improving the Mechanical Integrity

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Corrosion and failure induced economic loss is huge for power generating plants and chemical processing plants. The simple and fast way, but sometimes a costly way, to restore the operation of production facility is to replace the damaged parts with the same part number or made with the same material. Other maintenance strategies such as preventive maintenance and material upgrading is worthy of implementation. A material/corrosion engineer can play an important role in reducing the economic loss and boosting the mechanical integrity by confirming the failure mechanism(s) and preventing from reoccurrence. Although the group of material and corrosion engineers is relatively small in plants, they would play an essential role in process development, trouble shooting, and maintaining reliability. Furthermore, exchanging technical information and networking with corrosion community could help improve the problem-solving capability. Several examples are used to explain the role of corrosion engineer in power generating and chemical processing plants.