

Hou Baorong, Institute of Oceanology, Chinese Academy of Sciences

Baorong Hou has devoted himself to mechanism research, techniques development and industrialization of marine corrosion and protection. He has made outstanding contributions in the field of corrosion protection, and promoted the development of corrosion and protection in China. He clarified the marine corrosion mechanisms and established the system of marine corrosive environment theory. Moreover, he developed Petrolatum Tape and Covering system (PTC) and Oxidation Tape and Covering system (OTC) as novel corrosion protection techniques suitable for marine steel constructions in our country. These techniques have been industrialized and applied on many key projects, such as Wenchang satellite launch center in Hainan, five-hundred-meter aperture spherical radio telescope (FAST), Qingdao Port, Dalian Port, and so on. As the chief scientist, he organized the most comprehensive and systematical corrosion investigation in China till now, and figured out the corrosion costs of China, which provided a scientific basis for formulating relevant policies, regulations and standards and effectively reducing corrosion costs.



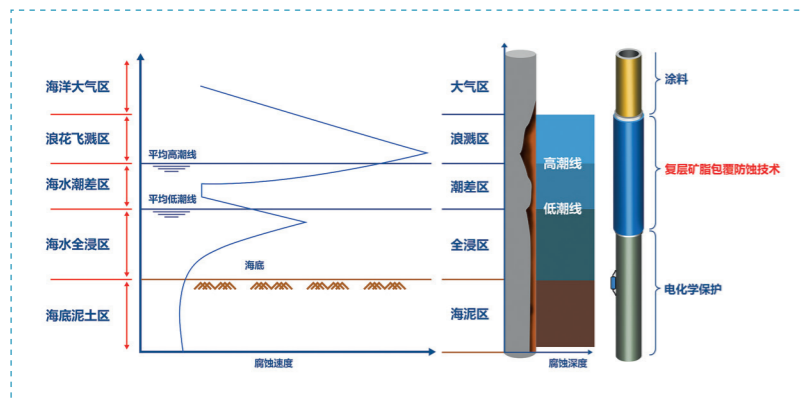
侯保荣
Hou Baorong

侯保荣

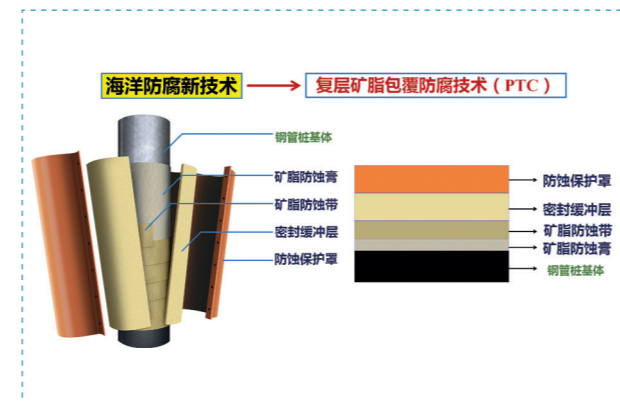
推荐单位：中国科学院海洋研究所

主要科技贡献：

侯保荣院士长期致力于海洋腐蚀与防护机理研究、技术研发和产业转化，在腐蚀防护领域做出了杰出贡献，有力推动了我国腐蚀与防护领域的发展。厘清了海洋腐蚀机理，建立了海洋腐蚀环境的理论体系，研发的复层矿脂包覆防腐技术 (PTC) 和氧化聚合包覆防腐技术 (OTC) 开辟了我国海洋钢铁设施防护新路径。研究成果在海南文昌卫星发射中心、“中国天眼”FAST 等重大工程和青岛港、大连港等数十个桥梁港口码头成功应用。主持了我国迄今为止最全面的全国腐蚀调查，摸清了我国腐蚀成本，为制定相关政策法规及标准规范、有效降低腐蚀成本提供了科学依据。



海洋钢结构的腐蚀倾向和防腐对策
The corrosion and protection of steel in the marine environment



复层矿脂包覆防腐技术 (PTC) 示意图
Schematic diagram of Petrolatum Tape and Covering system (PTC)



侯保荣在春晓油气田工程现场
Hou Baorong at Chunxia oil field

侯保荣主持了最全面系统的中国腐蚀成本调查

研究成果：2014年我国全行业腐蚀成本

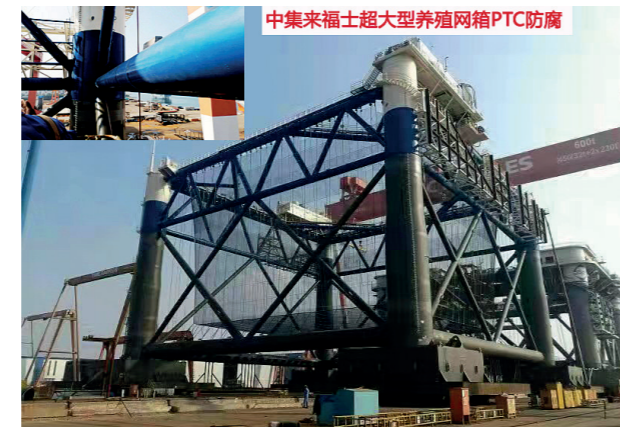
- 总成本为 2.1万亿
- 占当年GDP的 3.34%
- 人均承担的腐蚀成本 1555元

腐蚀防护力度是一个国家文明和繁荣程度的标志。如果采取有效的腐蚀防护策略，25%-40%的腐蚀损失可以避免！

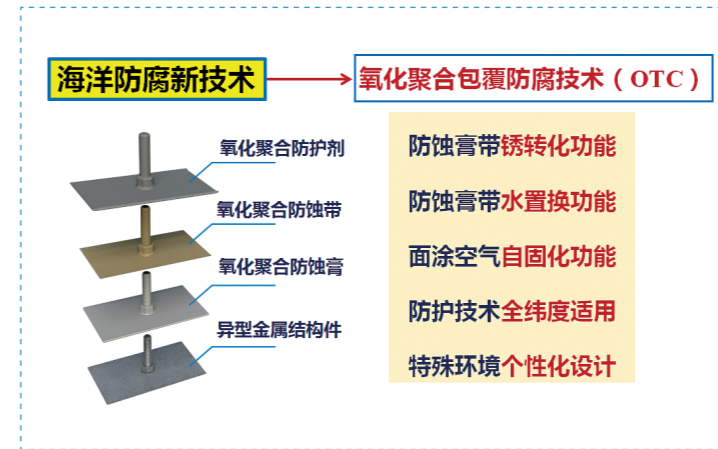
中国腐蚀调查
Investigation on the corrosion cost of China



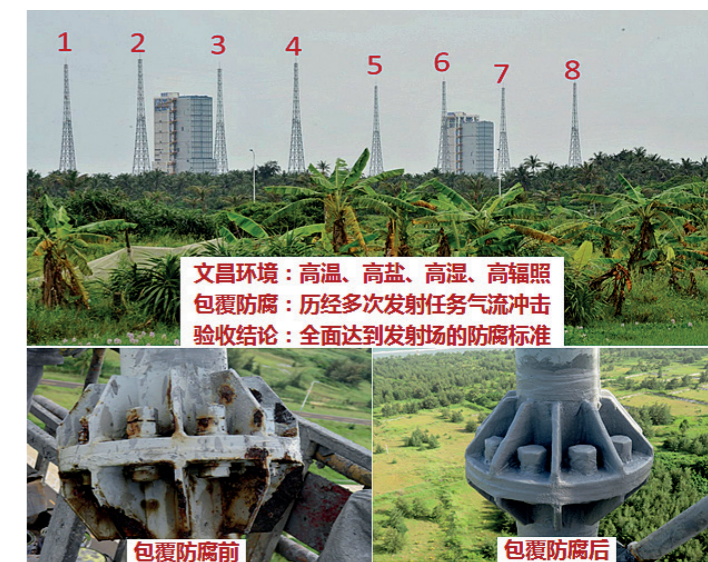
PTC 典型应用案例
Typical application projects of PTC



中集来福士超大型养殖网箱 PTC 防腐工程
PTC applied on huge aquacultural cages of CIMC RAFFLES



氧化聚合包覆防腐技术示意图
Schematic diagram of Oxidation Tape and Covering system (OTC)



文昌发射中心1-8号避雷塔法兰 OTC 防腐工程
OTC applied on steel flanges of lightning arresters at Wenchang satellite launch center in Hainan