



SAARTHI - सारथी

करियर मार्गदर्शन पोर्टल · Career Guidance Portal

"सही मार्गदर्शन, उज्ज्वल भविष्य।"

करियर शीट · CAREER SHEET

संक्षारण इंजीनियर

A Corrosion Engineer finds and applies ways to stop rust and material decay in metals — keeping bridges, pipelines, ships, refineries and plants durable. They select materials, apply coatings and cathodic protection, and monitor...



Scan for everything on this career

Salary, exams, colleges, the routes in and the steps after — all on the portal.

career.gsssjethantri.in/#/career/eng-4704

राजकीय उच्च माध्यमिक विद्यालय, जेठन्तरी

Govt. Sr. Sec. School, Jethantri · ब्लॉक समदड़ी · बालोतरा (Block Samdari · Balotra)

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सुशील कुमार शर्मा

प्रधानाचार्य, रा.उ.मा.वि. जेठन्तरी · मास्टर ट्रेनर
Principal, GSSS Jethantri · Master Trainer



श्री चेनाराम चौधरी

प्रधानाचार्य, डाइट बाड़मेर
Principal, DIET Barmer



श्रीमती संघमित्रा

वरिष्ठ व्याख्याता, डाइट बाड़मेर (सहयोग)
Sr. Lecturer, DIET Barmer (Support)



भरत चौधरी

अभिकल्पना व विकास · व्याख्याता (इतिहास)
Designed & developed · Lecturer (History)

विशेष धन्यवाद · SPECIAL THANKS



सुरेन्द्र सिंह राठौड़

व्याख्याता (इतिहास) · रा.उ.मा.वि. कानाना



सुरेश कुमार सैन

व्याख्याता (भूगोल) · रा.उ.मा.वि. रामसीन मूंगड़ा



वनिता कुमारी

व्याख्याता (इतिहास) · रा.उ.मा.वि. रामसीन मूंगड़ा



कमलेश चौधरी

व्याख्याता (राजनीति विज्ञान) · रा.उ.मा.वि. टापरा

करियर मार्गदर्शन कार्यशाला, डाइट बाड़मेर (14-17 जुलाई 2026) में विकसित व लोकार्पित
Developed & unveiled at the Career Guidance Workshop, DIET Barmer (14-17 July 2026)

यह एक स्वतंत्र परियोजना है, जो सरकार की आधिकारिक करियर-मार्गदर्शन सामग्री पर आधारित है। · An independent project based on the Government's official career-guidance content.

1 About this career

A Corrosion Engineer finds and applies ways to stop rust and material decay in metals — keeping bridges, pipelines, ships, refineries and plants durable. They select materials, apply coatings and cathodic protection, and monitor structures. It is a specialised engineering career rooted in metallurgy and materials science.

2 At a glance

Minimum qualification	B.Tech in Metallurgical/Materials Engineering
Work mode	Plant, field and laboratory
Demand	Good — oil, energy & infrastructure
Top earning	₹1,67,000+/month

3 What you need

INTERESTS

- Interest in science, chemistry and maths
- Interest in metals, materials and construction
- Analysing problems

ABILITIES

- Analytical, scientific thinking
- Comfortable working in a team
- Good with computers and data

KEY SKILLS

- Corrosion testing and assessment
- Coatings and surface treatment
- Failure analysis and inspection
- Selecting metals and alloys
- Cathodic protection systems
- Safety standards and documentation

4 How to get there

- 1 Pass 10+2 with science (Physics, Chemistry, Maths).
- 2 Do a B.Tech in Metallurgical Engineering or Materials Science.
- 3 Sit JEE Main/REAP for admission.
- 4 Optionally do an M.Tech or PG Diploma in corrosion science/technology.
- 5 Start in industry as a project/systems engineer.
- 6 Advance with NACE/AMPP certification and specialisation.

MAIN EXAMS

- JEE Main / REAP (engineering entry)
- GATE (for M.Tech and PSU jobs)

5 Where to study

GOVERNMENT INSTITUTES

- एम.बी.एम. विश्वविद्यालय (मेटलर्जिकल इंजीनियरिंग) — Jodhpur, Rajasthan (<https://www.mbm.ac.in>)
- मालवीय राष्ट्रीय प्रौद्योगिकी संस्थान (MNIT) — Jaipur, Rajasthan (<https://www.mnit.ac.in>)
- भारतीय प्रौद्योगिकी संस्थान (IIT) मद्रास — Chennai, Tamil Nadu
- राष्ट्रीय प्रौद्योगिकी संस्थान (NIT) — Durgapur, West Bengal

PRIVATE INSTITUTES

- मणिपाल यूनिवर्सिटी जयपुर — Jaipur, Rajasthan
- BITS पिलानी — Pilani, Rajasthan
- वेल्लोर इंस्टीट्यूट ऑफ टेक्नोलॉजी — Vellore, Tamil Nadu

ONLINE

- NPTEL (संक्षारण इंजीनियरिंग पाठ्यक्रम) — Online (<https://nptel.ac.in/courses/113108051>)
- Coursera (Corrosion) — Online (<https://in.coursera.org/learn/corrosion>)

FEES

About ₹50,000-1,50,000/year in government institutes; ₹1,50,000-3,00,000/year in private ones.

SCHOLARSHIPS

- राष्ट्रीय छात्रवृत्ति पोर्टल / National Scholarship Portal (<https://scholarships.gov.in>)
- Buddy4Study (<https://www.buddy4study.com>)
- विद्यालक्ष्मी शिक्षा ऋण / Vidya Lakshmi Education Loan (<https://www.vidyalakshmi.co.in>)

6 What the work is like

WHERE YOU WORK

Construction, oil and gas, energy plants, on/off-shore drilling, industrial manufacturing, aerospace and mining.

WORK CULTURE

Usually 5-6 days a week, 8-9 hours; shift systems possible at plants and field sites. A mix of lab work, site inspection and data. Opportunities exist for persons with disabilities.

WHO HIRES

- | | |
|--|---|
| • Oil and gas companies (ONGC, IOCL, refineries) | • Steel and metal plants (SAIL, Hindustan Zinc) |
| • Energy and power generation | • Defence, aerospace and shipbuilding |
| • Research institutes (CSIR-CECRI, IGCAR) | • Infrastructure and construction companies |

DEMAND (2026)

Expansion in oil-gas, power, bridges-pipelines and industrial infrastructure keeps demand for skilled corrosion engineers good in 2026; it is a niche field with few trained people.

7 Career growth

- 1 Project Engineer
- 2 Systems / Corrosion Engineer
- 3 Senior Corrosion Specialist
- 4 Engineering Manager
- 5 Technical Head / Consultant

EARNINGS

Starting	₹35,000-55,000/माह
Mid level	₹70,000-1,10,000/माह
Senior level	₹1,67,000+/माह

Source: PayScale and NCS, 2026; much higher in oil-gas, PSUs and abroad.

8 The good parts · The challenges

The good parts

- Niche field — good demand and pay
- Opportunities in industry, research and abroad
- Meaningful work keeping infrastructure safe

The challenges

- Tough/hazardous field and plant environments
- Exposure to chemicals and remote sites
- Further study and certification for specialisation

9 Real-life journeys

U. Kamachi Mudali

Corrosion scientist; Vice Chancellor, Homi Bhabha National Institute

Prof. U. Kamachi Mudali earned an M.Tech from IIT Bombay and a PhD in corrosion at IGCAR; he researched materials and coatings for India's Fast Breeder Reactor and won honours including the Homi Bhabha Science & Technology Award.

Department of Atomic Energy, Government of India · <https://dae.gov.in/prof-u-kamachi-mudali-the-vice-chancellor-of-hbni/>

V. Saraswathy

Chief Scientist & Head, Corrosion & Materials Protection Division, CSIR-CECRI

Dr. V. Saraswathy served as Chief Scientist and Head of the Corrosion & Materials Protection Division at CSIR-CECRI, Karaikudi; she has researched preventing steel corrosion in concrete and durable construction.

CSIR-CECRI · <https://www.cecni.res.in/Profile.aspx?empcode=40153&seltab=profile&submenuheader=0>

10 Sources & further reading

1. Rajasthan Career Guidance — <https://cg.rajasthan.gov.in/careerguidance/hi/career/%e0%a4%95%e0%a5%8b%e0%a4%b0%e0%a5%8b%e0%a4%9c%e0%a4%a8-%e0%a4%87%e0%a4%82%e0%a4%9c%e0%a5%80%e0%a4%a8%e0%a4%bf%e0%a4%af%e0%a4%b0-corrosion-engineer/>
2. CSIR-CECRI (Central Electrochemical Research Institute) — <https://www.cecni.res.in>
3. NPTEL Corrosion Engineering course — <https://nptel.ac.in/courses/113108051>
4. National Scholarship Portal — <https://scholarships.gov.in>



And 770+ more careers — the whole portal

Interest and aptitude tests, government jobs, skill courses and a CV builder — free, no login, and it works offline.

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