



The Energy and Research Resources Institute (TERI)

TERI was formally established in 1974 with the purpose of addressing problems associated with gradual depletion of the earth's finite energy resources. Over the years, the Institute has expanded its activities to include all dimensions of sustainable development targeted at finding solutions to global problems in the fields of energy, environment and current patterns of development. The Institute is headquartered in New Delhi with several regional offices in India and abroad.

Dr. Malini Balakrishnan

Darbari Seth Block, IHC Complex,
Lodhi Road, New Delhi - 110 003, India

T: (+91 11) 2468 2100 / 41504900

F: (+91 11) 2468 2144 / 2468 2145

E: malinib@acidloop.in

www.teriin.org



VDEh-Betriebsforschungsinstitut (BFI) GmbH

For more than 40 years VDEh-Betriebsforschungsinstitut (BFI) GmbH is one of Europe's leading private-sector, non-profit institutes for applied research and development in the field of steel technology and a great number of other branches of industry. Its creative ideas and state-of-the-art facilities ensure sophisticated innovations and a high standard of advisory and development services with focus on the implementation of operational and industrial solutions for the industry.

Dr. Frank Roegerer & Dr. Miriam Sartor

Sohnstrasse 65,
40237 Düsseldorf, Germany

T: +49 211 6707-0

F: +49 211 6707-310

E: Frank.Roegerer@acidloop.in / Miriam.Sartor@acidloop.in

www.bfi.de



ASSIST

Asia Society for Social Improvement and Sustainable Transformation (ASSIST) is an international non-government organization focused on capacity building. It seeks to promote sustainable practices to address social problems in the developing world, with focus on Asia and Africa. ASSIST takes pride in its process-oriented approach to capacity building towards social improvement and sustainable transformation.

Mr. Sreenivas Narayanan / Mr. Platosen Samarasam

5/F A&V Crystal Tower, 105 Esteban Street,
Legaspi VillagE, 12229 Makati City, Philippines

T: (+632) 403 1890/ (+632) 403 8668

F: (+632) 403 8358

E: platosen@acidloop.in

www.assistasia.org



Society of Indian Automobile Manufacturers (SIAM)

Society of Indian Automobile Manufacturers (SIAM) is the apex Industry body representing 46 leading vehicle and vehicular engine manufacturers in India. SIAM is an important channel of communication for the Automobile Industry with the Government, National and International organisations. The Society works closely with all the concerned stake holders and actively participates in formulation of rules, regulations and policies related to the Automobile Industry. SIAM strives to keep pace with the socio-economic and technological changes shaping the Automobile Industry and endeavour to be a catalyst in the development of a stronger Automobile Industry in India.

Mr. Sushil Kumar

Core 4-B, 5th Floor, India Habitat Centre, Lodhi Road,
New Delhi - 110 003, India

T: 91 - 11 - 24647810 -12

F: 91-11-24648222

E: sushilkumar@acidloop.in

www.siamindia.com



Austria Recycling (AREC)

Austria Recycling (AREC) is working in sustainable industrial development at the interface between economy and environment, acting as a bridge between industry and environment. AREC supports enterprises and communities in particular in the process of the implementation of management systems, by technical and organizational consulting, empowerment of people and training for an eco-efficient, sustainable economic manner as well as in financial and social matters.

Mr. Stefan Melnitzky

Obere Donaustraße 71
1020 Wien, Austria

T: (+43) 1 2145600

F: (+43) 1 2145616

E: stefan.melnitzky@acidloop.in

www.arecon.at



adelphi

adelphi is a leading think tank for policy analysis and strategy consulting. adelphi offers creative solutions and services on global environment and development challenges for policy, business and civil society communities. Its projects contribute to sustaining natural life systems and fostering sustainable enterprises. adelphi's clients include international organizations, governments, public institutions, corporations and associations.

Mr. Mikael P. Henzler

adelphi Research, Caspar-Theyss-Strasse 14a
14193 Berlin, Germany

T: +49 30 89 000 68-0

F: +49 30 89 000 68-10

E: henzler@acidloop.in

www.adelphi.de



STENUM Asia

STENUM Asia Sustainable Development Society is a not-for-profit organisation, registered in Gurgaon, India since 2007. Its objective is to promote sustainable development by training and consultancy at enterprises on Resource Efficiency and waste minimisation through the Cleaner Production approach. It has impacted around 100 enterprises across sectors in India and helped them save money while saving the environment. The participating enterprises achieved higher resource efficiency at no or low investments.

Mr. Rajat Batra

SFF 105, Palam triangle, PalamVihar,
Gurgaon 122 017, India

T: +91 124 4078911 / +91 981 1051918

F: +91-124 4078914

E: rajat.batra@acidloop.in

www.stenum-asia.org

PROJECT FUNDED BY



European Commission SWITCH Asia Programme

The European Union is made up of 27 Member States who have decided to gradually link together their know-how, resources and destinies. Together, during a period of enlargement of 50 years, they have built a zone of stability, democracy and sustainable development whilst maintaining cultural diversity, tolerance and individual freedoms.

The European Union is committed to sharing its achievements and its values with countries and peoples beyond its borders.

Delegation of the European Union to India

65, Golf Links
New Delhi - 110 003

T: 91 - 11 - 49496565

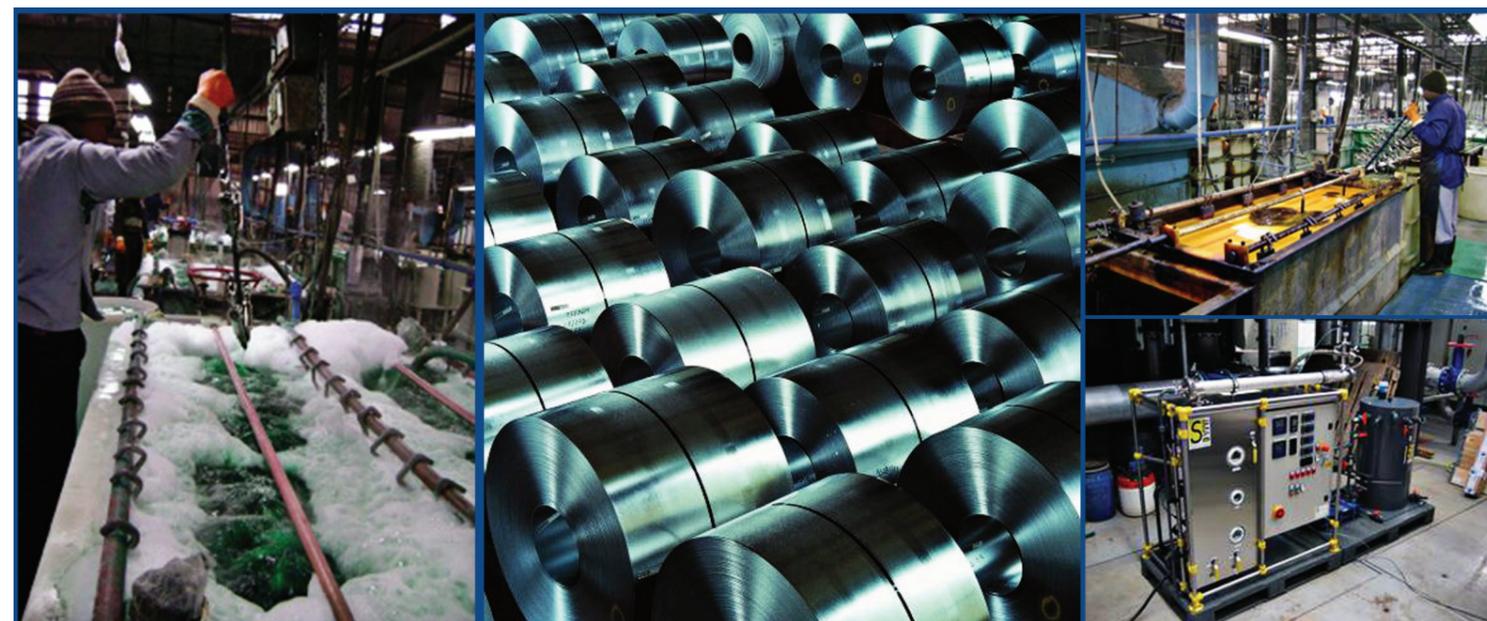
F: 91-11-49496555

E: delegation-india@eeas.europa.eu

www.delind.ec.europa.eu

ACIDLOOP

Sustainable production through market penetration of closed loop technologies in the metal finishing industry



For more Resource Efficiency, Economic and Environmental Profit

PROJECT FUNDED BY



PROJECT IMPLEMENTED BY



BACKGROUND

Small and Medium players (SMEs) constitute a major part of the ancillary industry (dealing primarily with metal finishing, electroplating and all types of metal surface treatments) which feeds the growing demand of the flourishing automobile industry in India. It is estimated that there are over 12000 SMEs in this industry employing over 13 lakh people.

SMEs continue to use inefficient processes and outdated technology leading to lower competitiveness, poor environmental performance and unsafe working conditions. SMEs are under constant cost and time pressure from their clients (up the automotive value chain), however very little is offered to help them address their challenges.

The project ACIDLOOP addresses these issues and constraints helping the SMEs meet the industry requirements by transferring the best practises on process optimisation, resource efficiency, cleaner production, waste minimisation / management, pollution control and acid recovery.

PROJECT

ACIDLOOP

Sustainable production through market penetration of closed loop technologies in the metal finishing industry

Project Duration: 48 Months

Project Location: India

Target Sector: Metal finishing industries (industries that use electroplating, painting, powder coating, pickling, anodising or allied processes)

Primary Target Groups:

- SMEs engaged in;
 - o electroplating of metallic parts
 - o painting of metallic parts
 - o anodising of metallic parts
 - o any surface treatment industry using acids
- Auto manufacturers / fabricators;
- Technology suppliers;
- Other MSMEs in the *target* region.

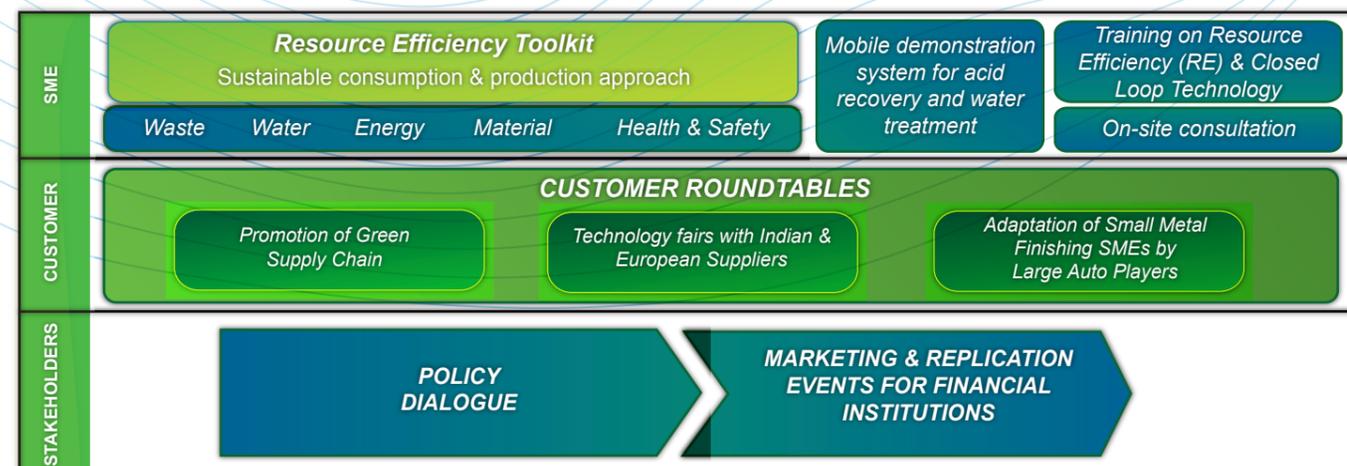
OBJECTIVES

The overall objectives of the project include promoting resource efficiency in the metal finishing companies (SMEs) that would lead to enhanced environmental quality and combat pollution.

Specific Objectives

1. To provide training and on-site consultancy to the SMEs on resource efficiency which would lead to reduced lead to reduced operating costs and improved environment.
2. To introduce Acid Recovery technologies among SMEs in the target sector.

PROJECT STRUCTURE



KEY ACTIVITIES

▶ Introductory workshops

A series of introductory workshops in several Indian cities (New Delhi, Gurgaon, Faridabad, Ahmedabad, Pune, Aurangabad, Chandigarh, Rajkot, Chennai, Bangalore and Hosur) will be organized to introduce the various project components to the target SME. The project aims to target 500 SMEs through these workshops. The workshops will sensitise the target SMEs on the need to shift to resource efficient practices and invite SMEs to join the project.

▶ Toolkit & training material

The project will develop training material and a self-assessment toolkit on Resource Efficiency. The toolkit will cover the themes of water, energy, waste, materials and health and safety. This will help SME to identify areas of improvements within the company.

▶ Mobile demonstration systems for Acid Recovery and water treatment

Three mobile demonstration systems will be developed for (a) nanofiltration (b) diffusion dialysis and, (c) retardation. The usefulness of such mobile demonstration systems will be showcased in selected SMEs across the country.

▶ Training workshops

The project will sensitize the SMEs on resource efficiency and closed loop technologies through extensive and interesting training workshops. A series of 6 training sessions will be conducted in the target cities on various resource efficiency topics and acid recovery.

▶ On-site Consultation on Resource Efficiency

Around 100 elected companies from the targeted cities will be visited and offered on-site consultation over a period of six months. The project will continuously offer guidance and support on the implementation of resource efficiency. Acid recovery measures will also be demonstrated in select companies in each region.

▶ Technology, customer and marketing events

These events will bring together European and Indian technology suppliers of facilitate tie ups with suitable sales support, branding etc. These will also bring together technology suppliers and the metal finishing industries. The customer roundtables will sensitize to adopt a green supply chain and encourage their resource efficiency practices. Financial institutions will also participate for discussion on financing schemes.

▶ Policy dialogue

Policy dialogues are aimed at promoting sustainable production techniques as well as initiating better framework conditions (acknowledgement of compliance certificates, environmental management schemes, tax exemptions for technologies and equipment, pricing of chemicals and resources) for SMEs investing into resource efficiency.

BENEFITS TO PARTICIPATING COMPANIES

- ❖ Reduced cost of operations
- ❖ Improved quality of process
- ❖ Reduced resource usage and pollution
- ❖ Enhanced competitiveness of SMEs
- ❖ New financial investment opportunities

