

## Environmental and Social Data Sheet

### Overview

Project Name: **Arvedi Modernisation Programme**  
 Project Number: 2014 0677  
 Country: Italy  
 Project Description: The promoter's modernisation programme with investments (a) addressing energy efficiency and emission improvement measures and (b) responding to market requirements with further downstream value adding processes. The project sites are located in Cremona and Trieste, both in Northern Italy.

EIA required: yes, for parts of the project

The EIA for the Cremona component of the project is currently under preparation as are the EIA for the pickling line and the AIA application for Trieste.

Project included in Carbon Footprint Exercise<sup>1</sup>: yes

(details for projects included are provided in section: "EIB Carbon Footprint Exercise")

### Summary of Environmental and Social Assessment, including key issues and overall conclusion and recommendation

**The promoter company** Acciaieria Arvedi is well managed with regard to HSE issues. It has policies, procedures and plans in place ensuring continued improvements. Apart from the newly acquired plants in Trieste, all its metallurgical facilities are externally certified under ISO 9001, 14001 and OHSAS 18001. All technical components of this current modernisation programme are conforming to BAT standards.

#### Environmental procedures and permits:

- a. **Cremona:** The plant site and current activities are covered by a valid environmental authorisation (AIA – Autorizzazione Integrata Ambientale) based on IED Directive 2010/75/EU. The replacement of the EAF (electric arc furnace) falls under annex II of Directive 2011/92/EU. Before the Competent Authority opined upon the requirement of having a respective EIA established, the company decided to produce an EIA on a voluntary basis, together the required application for a new AIA. Once established and accepted, this would lead to a renewal of the AIA valid for 10 years.  
 The Cremona works do not fall under Directive 96/82/EC (Seveso). It is not yet known whether this will change under Italian law based on Directive 2012/18/EU (Seveso III), currently under preparation.
- b. **Trieste:** The installation of a cold rolling mill does not fall under annex II of Directive 2011/92/EU, however the surface treatment installation for the subsequent pickling of the steel bands does. A respective EIA is currently under preparation and is expected to be presented to the competent authority in September 2015. The NTS however will be ready much earlier and constitutes part of the NTS of the AIA application.  
 The existing AIA (based on IED Directive 2010/75/EU) for the site and activities requires renewal and modification. In total, six action points have been proposed to improve the environmental situation of the site. These are the following:
  1. Improvement of the dust capture from the raw material bins;
  2. Improvement of the dust capture from the coking plant;
  3. Sealing of general yards and raw materials storage areas;

<sup>1</sup> Only projects that meet the scope of the Pilot Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: above 100,000 tons CO<sub>2</sub>e/year absolute (gross) or 20,000 tons CO<sub>2</sub>e/year relative (net) – both increases and savings.

4. Collection of rain water from the yards with a separation of first-5-minutes storm water with respective treatment;
5. Separate storage area for scrap considered as waste according to EU rules;
6. Approval of the cold rolling mill including annealing furnace and pickling line. This point will be treated under the respective EIA mentioned above.

Installation of these measures would be a condition to granting a new AIA valid for 10 years.

The Trieste steelworks fall under Directive 96/82/EC (Seveso) due to the storage on site of inflammable carbon monoxide and hydrogen. They are compliant with this directive. However, verification is currently ongoing if and what changes need to be implemented in view of the forthcoming Italian law based on Directive 2012/18/EU (Seveso III) coming into force in June 2015.

With regard to the outstanding EIAs and AIA application, the following disbursement conditions will be integrated in the Finance Contract:

- Disbursements of the funds related to the EAF in Cremona can only take place after having received a copy of the NTS of the EIA for this component.
- Disbursement of the funds related to the pickling line in Trieste can only take place after having received a copy of the NTS of the application for the new AIA for the Trieste site.

In conclusion, the overall project will not result in significant additional negative environmental and social impacts compared to the current situation. The project is therefore considered acceptable for Bank financing.

## **Environmental and Social Assessment**

### **Environmental Impacts**

**In detail**, the environmental and social impacts and consequences of the project and its components are expected to be as follows:

- New EAF for steel smelting at the Cremona site:
  - Reduced specific electrical energy requirements due to pre-heating of furnace charge
  - Reduced specific natural gas requirements due to changed tapping arrangements
  - Reduced dust generation in the off gas system due to preheating charge acting as an additional filter
  - Reduced CO<sub>2</sub> footprint as a consequence of lower energy consumption
  - Reduced VOC, dioxin and furan development due to post-combustion burning of off-gases with subsequent quenching
  - Elimination of CO explosion risk due to post-combustion burning of off-gases
  - Reduced noise due to complete encasing of the off-gas streams
  - Reduced furnace movements due to new tilting technology resulting in less danger from tilting furnace
  - Reduction of crane movements resulting in less danger from moving loads
  - Longer term safeguarding of employment by the company due to its enhanced competitiveness
- New cold rolling mill at Trieste:
  - Increased direct and indirect employment
  - Indirectly: production of higher steel qualities required for improved energy efficient equipment, machinery and automotive parts.
- Rain water collection and treatment in Trieste:
  - Retention of rain water from flushing industrial dust into the sea or in the underground
  - Treatment of rainwater by settling and subsequent reuse on the premises in order to create a closed loop.

## **EIB Carbon Footprint Exercise**

The annual CO<sub>2</sub> emissions of the project have been assessed separately for the EAF component in Cremona and the cold rolling mill component in Trieste.

**Cremona:** The CO<sub>2</sub> emissions in a future standard year (2019) of operation are estimated at 177 kt CO<sub>2</sub>/a, which constitute the project's absolute emissions. This figure assumes full production of the EAF and takes into account direct and indirect emissions resulting from the use of energy.

The baseline emissions are based on the current production and known consumption figures of the current EAF. In addition, the baseline figure comprises the energy currently required to produce steam used in the downstream pickling line and elsewhere, which in future will be co-produced by the EAF off-gas heat exchangers. This leads to a baseline emission figure of 235 kt CO<sub>2</sub>/a and relative emissions of minus 58 kt CO<sub>2</sub>/a, representing a net emission reduction of some 25 %.

**Trieste:** It is assumed that the energy use and hence absolute CO<sub>2</sub> emissions for the cold rolling mill in Trieste are of a similar amount than those of an equivalent plant which would have to be built elsewhere in Europe (baseline) in order to serve the growing market of the products produced in this plant (predominantly ultrathin electric steel and high strength automotive steel). Relative emissions of this component would therefore be zero.

For the annual accounting purposes of the EIB Carbon Footprint, the project emissions will be prorated according to the EIB lending amount signed in that year, as a proportion of project cost.

## **Social Assessment, where applicable**

**Employment:** Overall, the project is expected to contribute to ensure the sustainability of the company's plants and installations and thus contributing to the preservation of the overall employment.

The replacement of the EAF in Cremona is not expected to lead to any change in employment. However, the implementation of the cold rolling mill in Trieste will lead to a net increase of employment to the order of 250 FTE.

## **Public Consultation and Stakeholder Engagement, where required**

Public consultation on EIAs and AIAs is a well-developed and followed procedure in Italy and is systematically carried out for the approval by the respective competent authority where so required. Public consultations for the project have not been finalised yet.

## **Other Environmental and Social Aspects**

The company is well managed with regard to environmental and social issues:

- It currently complies with all environmental protection regulations and standards provided by national and EU law. Arvedi holds the required AIAs for all the industrial activities on site – which incorporates the requirements of the Seveso Directive 96/82/EC and the provisions introduced by the IED 2010/75/EU ensuring the application of BAT.
- Forthcoming operational changes due to new investment both in Cremona and Trieste are duly addressed by respective EIAs and new AIA applications. Preparation to comply with Directive 2012/18/EC (Seveso III) is well under way.
- It has an ISO 14001 certified Environmental Management System, ISO 9001 Quality Management System and OHSAS 18001 Occupational Safety Management System in place for its sites with the exception of the only recently acquired Trieste site, the certification of which is under preparation.