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15 MW captive Power plant based on waste heat recovery from flue gases from Sponge iron plants at SAL Steel Ltd in the State of Gujarat, India

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9105043902

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Description:

The proposed CDM project by SAL Steel Ltd consists of a 40 MW power plant, out of which 25MW is generated from Lignite based Fluidised Bed Combustion Boiler and the remaining 15MW is generated from two waste heat recovery boilers (WHRB). The power generation from WHRB steam will substitute an equivalent amount of highly carbon intensive grid electricity generation to the extent of 15 MW, thus reducing Greenhouse Gas emission. The project activity is expected to avoid 67,020 t CO₂ per year.

Host Country: India

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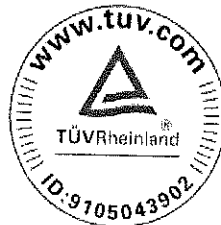
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Open for Public Comments:

2007-10-18 to 2007-11-16

Post your comments:

Send your comments to Mr. Manfred Brinkmann by email to cdm@tuv.com, or by FAX +81 (0)45 470-2361



All Certificates of this Process:

Process Certificates

Type of Certificate

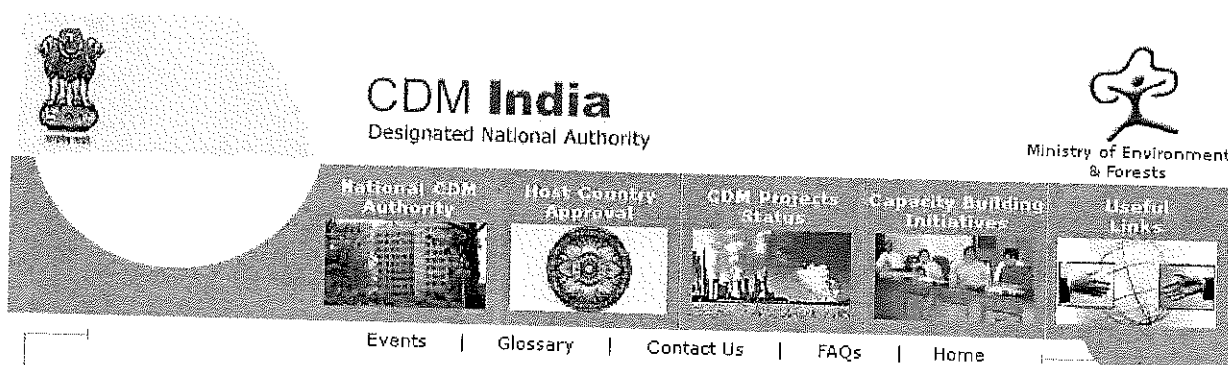
Certificate Number

[Kyoto Protocol to the U.N.F.C.C.C. \(1997\)](#)

01.997.9105043902

[Kyoto Protocol to the U.N.F.C.C.C. \(1997\)](#)

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Project Name & Location

State

Sector

Status

PCN Link

* Energy efficiency and fuel switch project at Welspun India Limited Gujarat

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* Energy efficiency and fuel switch project at Welspun India Limited Gujarat

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Karnataka

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Rajasthan

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PROJECT CONCEPT NOTE

(ID no. 541-07)

1.	Name of Project	"Energy efficiency and fuel switch project at Welspun India Limited" in Vapi, Western Region, Gujarat
2.	Location of the Project (Village / District / State)	Vapi, Western Region, Gujarat
3.	Brief Description of the Project	This project activity involves installation of an energy efficient 5.9 MW gas turbine with Waste heat recovery system and 800TR vapour absorption chillers, a 6.79 MW gas engine with 1260 TR vapour absorption chillers. The installation of Vapour Absorption Chillers replaces the use of Centrifugal Chillers thereby reducing the electricity consumption for chilled water generation. The project activity also involves switching of fuel from Furnace Oil to natural gas in electricity, steam and heat generation at above applications and processes. The first fuel switch measure is happening due to installation of new Natural Gas based Gas turbine and Gas engine which replaces use of FO based DG set. The second fuel switch measure is happening at the existing boilers where switching of fuel from furnace oil to natural gas is done at 2 of the 3 number of boilers.
4.	Estimate of GHG abatement in tCO ₂ eq.	194945
5.	Host Country Approval Status	Approved
6.	Project Owner / Proponent	M/s Welspun India Ltd. Survey No.76, Morai Village, Vapi, Valsad Dist, Gujarat – 396191. Contact Person: Mr. Tarnjit Singh, V.P (Engineering &Power plant).

7.	Baseline Methodology	Type II: Energy Efficiency Improvement Projects Category D: Energy efficiency and fuel switching measures for industrial facilities. II.D./Version 9. Sectoral Scope: 4, EB 31
8.	Project Start date	27/11/2004
9.	Project completion date	23/03/2007

**SECTION A. General description of project activity****A.1 Title of the project activity:**

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Waste heat recovery and captive power generation at Mono Steel India Ltd, Gujarat, India

Version: 01

01/06/2007

A.2. Description of the project activity:

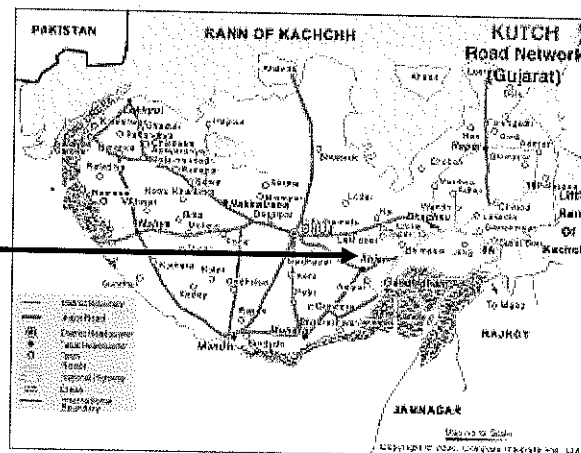
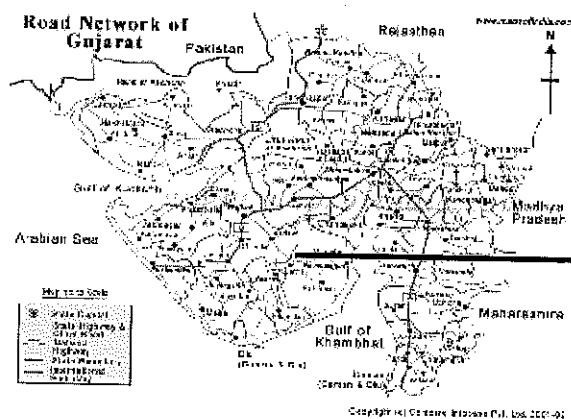
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The project activity has been developed by Mono Steel India Ltd, (MSIL) with its core business being sponge iron manufacturing and belongs to the “Mono group” from the state of Gujarat, India.

The purpose of the proposed project activity is to generate electricity by using waste heat contained in the waste gases from two numbers of After Burning Chambers (ABC) of two no's 100 TPD each Direct Reduced Iron (DRI) kilns. The waste heat will be transferred to de-mineralized water which is converted to steam in two waste heat recovery boilers (WHRB) each of 13 tonnes per hour (TPH) producing 26 TPH of steam at 66 ± 0.5 ata and $485 \pm 5^\circ\text{C}$. The steam produced will be fed into the turbo-generator (TG). In the phases of inconsistent gas generation, equivalent steam will be contributed through a stand-by Charcoal fired FBC Boiler which is out of the project boundary. Thus, the turbine generator will utilize 26 TPH of steam generated from WHR boilers to generate total 5.5 to 6.0 MW power.

The 2 x100 TPD sponge iron facility at Dhamdaka, Anjar was commissioned in the year 2005-2006. The company manufactures sponge iron, steel billets and steel ingots. The effort taken through this project activity aims primarily to achieve better energy efficiency, improve the working environment of Sponge Iron-making and sustainable development in the industry and the region. The power generated by the project activity shall mainly be used to meet the primarily the captive power requirement of MSIL plant.

The project activity will facilitate replacement / displacement of an equivalent amount of electricity to the extent of 5.6 to 6 MW electricity generated from steam produced from waste heat recovered from waste gases in DRI, which would have been otherwise produced by steam from captive coal based power plant. The total CO₂ emission reduction for the entire crediting period of 10 years have been calculated as **4,06,430** Metric Tonnes (MT) of CO₂ equivalent (tCO₂e).

**A.4.1.1.****Host Party(ies):**

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India

A.4.1.2.**Region/State/Province etc.:**

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District : Kutch

State : Gujarat

A.4.1.3.**City/Town/Community etc:**

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Village : Dhamdaka,

Taluka : Anjar

A.4.1.4.**Detail of physical location, including information allowing the unique identification of this project activity (maximum one page):**

>>

Physical Location:

The project activity is waste heat recovery boiler (WHRB) and power generation system. The activity is located in the Mono Steel India Ltd. premise on the downstream side of the DRI rotary kiln. The location of the project activity is selected to suit power generation and distribution of power for Steel for steel melting and casting operation. ESP is implemented after the WHRB which cleans the exhaust gas from to maintain the air pollution compliance.

Geographical Location:

State	Gujarat
District	Kutch
Taluka	Anjar
Distances from	