



**CLEAN DEVELOPMENT MECHANISM
PROJECT DESIGN DOCUMENT FORM (CDM-SSC-PDD)
Version 03 - in effect as of: 22 December 2006**

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**Revision history of this document**

Version Number	Date	Description and reason of revision
01	21 January 2003	Initial adoption
02	8 July 2005	<ul style="list-style-type: none">•The Board agreed to revise the CDM SSC PDD to reflect guidance and clarifications provided by the Board since version 01 of this document.•As a consequence, the guidelines for completing CDM SSC PDD have been revised accordingly to version 2. The latest version can be found at http://cdm.unfccc.int/Reference/Documents.
03	22 December 2006	<ul style="list-style-type: none">•The Board agreed to revise the CDM project design document for small-scale activities (CDM-SSC-PDD), taking into account CDM-PDD and CDM-NM.



SECTION A. General description of small-scale project activity

A.1 Title of the small-scale project activity:

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Energy efficiency measure through dry de-dusting system in blast furnace

Version 01

Date: 09/08/07

A.2. Description of the small-scale project activity:

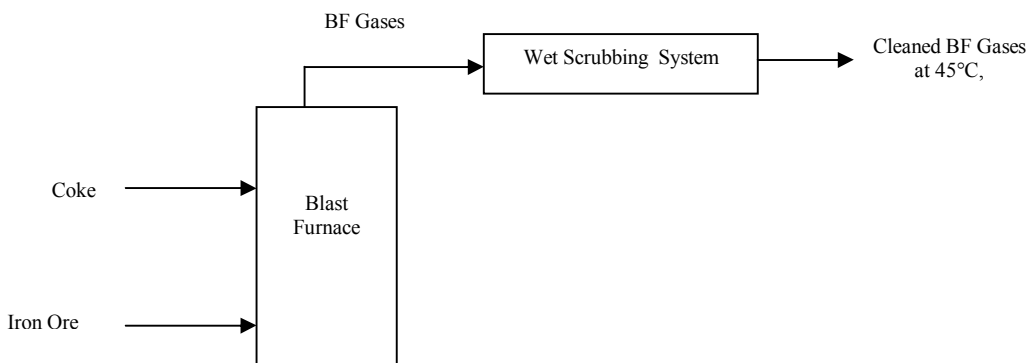
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Purpose

The proposed project activity involves installation of a dry de-dusting system (DDS) for the cleaning of the gases coming out of blast furnace (BF). The gases emanating from the BF are at high temperature and also have high particulate matter (PM) concentration. The purpose of installation of DDS is to retain the thermal energy of BF gases while simultaneously reducing its PM concentration. The project activity replaces the wet scrubber system for cleaning the BF gas. The use of wet scrubbing system results in cooling of the BF gas and increases the moisture content of the gases. This eventually results in reduction of the sensible heat of the BF gas. Due to the project activity, the sensible heat of BF gas is retained and can be further utilized for other process demands thereby increasing the overall efficiency of the system and reducing the CO₂ emissions associated with the amount of energy conserved.

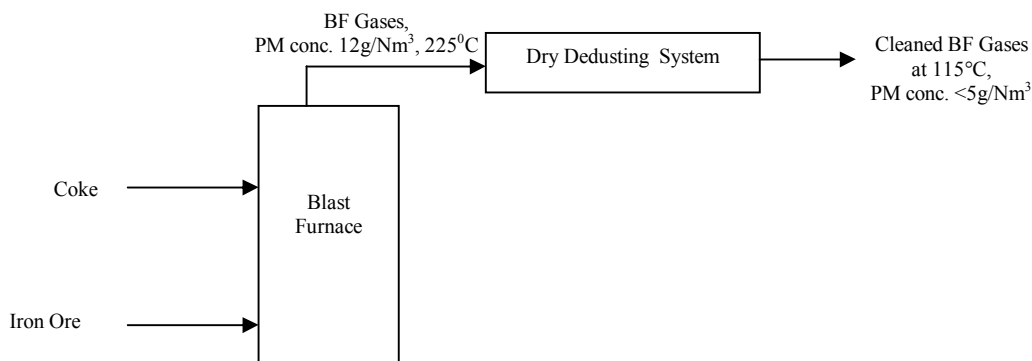
Pre Project Scenario

A wet scrubber system was used prior to the implementation of the project activity. The schematic diagram of the wet scrubbing system is shown below:



Post Project Scenario

In the project activity a DDS would be installed. The schematic diagram of the DDS is shown below:



In the absence of the project activity, usage of a wet scrubber system would have resulted in loss of the sensible heat of the BF gases. Thus by installation of DDS, the project activity reduces GHG emissions which would have occurred for the equivalent amount of energy conserved.

Project Activity's contribution to Sustainable Development

Social well being:

The project activity results in direct generation of employment. The employment generation would be both during the installation and the operational phase of the project activity wherein people would be employed for running the DDS once it gets commissioned.

Environmental well being:

The project activity will help positively in the direction of global climate change by avoiding the emissions of GHG which would have been occurred to generate equivalent amount thermal energy. The project activity will also help in reducing the water demand which would have been there to operate the wet scrubber system.

Economic well being

The project activity would also help in reducing the energy requirements as running the wet scrubber system requires more energy to operate as compared to DDS. Thus the project activity would also help in natural resource conservation thereby improving the economy of the country to some extent.



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Technological well being

The technology stated for use in the project activity represents environmentally safe and sound technology for the application.

Thus it is ensured that the project activity leads to sustainable development.

A.3. Project participants:

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Name of Party involved (*) (host) indicates a host party)	Private and/or public entity(ies) Project participants(*) (as applicable)	Party involved wishes to be considered as project participant (Yes/No)
India (host)	Jindal Saw Limited (JSL)	No

A.4. Technical description of the small-scale project activity:

A.4.1. Location of the small-scale project activity:

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The project activity is located at the integrated pipe unit (IPU) manufacturing unit of JSL in Samaghogha, Mundra, Gujarat

A.4.1.1. Host Party(ies):

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India

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

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Gujarat

A.4.1.3. City/Town/Community etc:

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Village Samaghogha, Town Mundra, District Kutch.

A.4.1.4. Details of physical location, including information allowing the unique identification of this small-scale project activity :

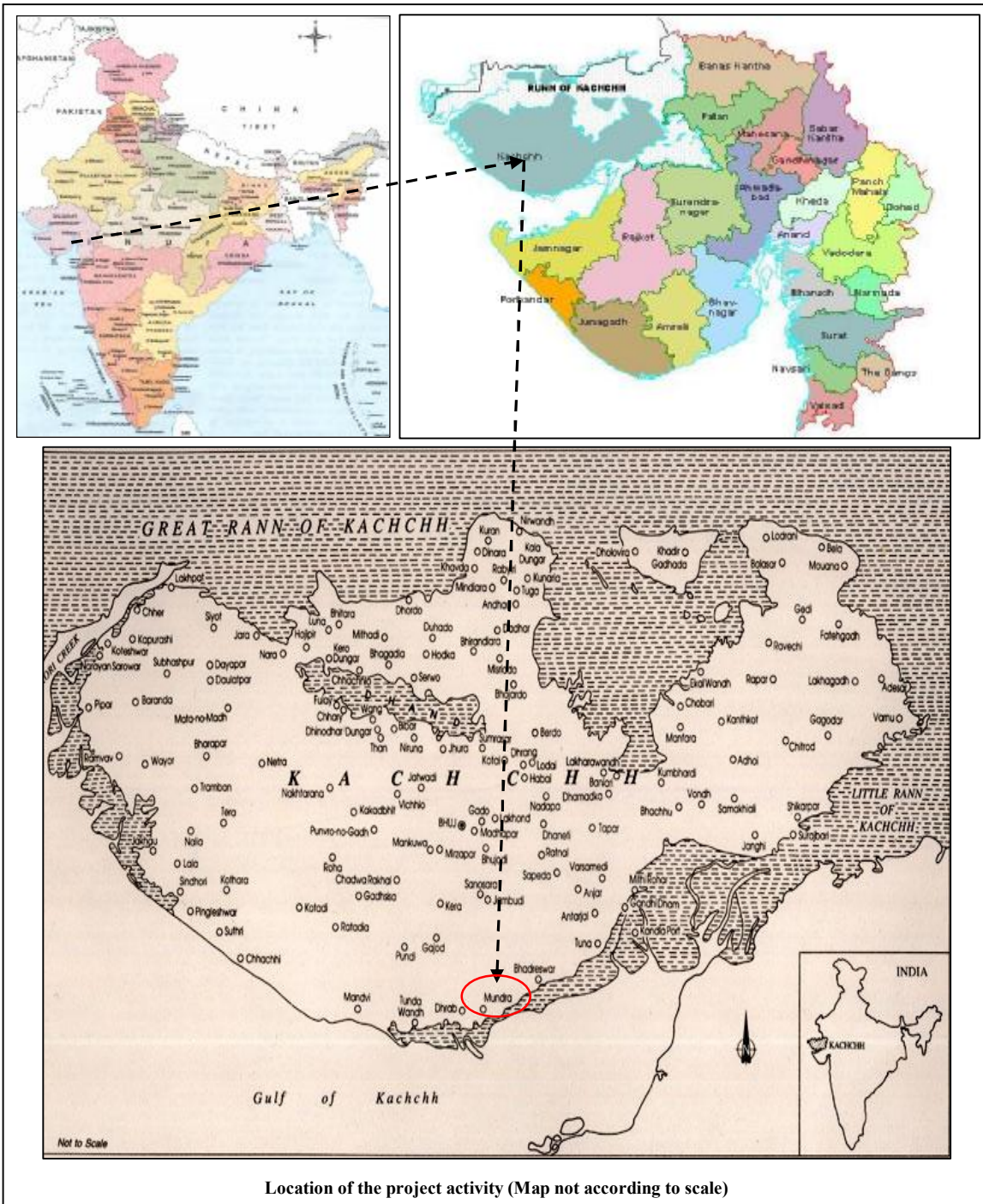
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The project activity is located at JSL and can be reached as follows: - Nearest airport is at Bhuj - 45 kms; nearest railway station is at Gandhidham - 65 kms; By Road: 15 kms from the Gujarat State Highway; 12 kms from Mundra Port (Gujarat), 75 kms from Kandla Port (Gujarat), 1000 kms from Mumbai Port (Maharashtra). The geographical coordinates of Mundra are:

Longitude: 69⁰52'E, Latitude: 22⁰49' N.

The Location of the project activity on map of India is shown below:

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A.4.2. Type and category(ies) and technology/measure of the small-scale project activity:

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Type: II - Energy Efficiency Improvement Project

Category: II.D. - Energy efficiency and fuel switching measures for Industrial facilities (ver 10, EB 33, Sectoral Scope 4)



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Technology:

The project activity is BF gas DDS. The DDS saves considerable amount of sensible heat which would have been lost during wet scrubbing process, in the absence of the project activity.

The process flow of the DDS is as follows:

BF furnace gases after passing through gravity dust catcher would be delivered to 6 numbers of bag dedusting chambers connected in parallel. The cleaned gas from these chambers would be sent to the clean gas mains. The dust will be collected in the dust hoppers from where it will go to the dust bins which will be emptied at regular intervals.

The specifications of the dry dedusting system are as follows:

Gas handling capacity	84000 m ³ /hr
Filtering speed	0.36 m /min
Quantity of chambers	6.0
Quantity of bag	954 (6.0 x 159)
Specification of bag	Φ130 × 6000 mm
Dust content at inlet	12g/Nm ³
Dust content at outlet	< 5g/Nm ³

A.4.3 Estimated amount of emission reductions over the chosen crediting period:

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Years	Estimation of annual emission reductions in tonnes of CO ₂ e
2007-08	4,922
2008-09	4,922
2009-10	4,922
2010-11	4,922
2011-12	4,922
2012-13	4,922
2013-14	4,922
2014-15	4,922
2015-16	4,922
2016-17	4,922
Total estimated reductions (tonnes of CO₂e)	49,220
Total number of crediting years	10 years
Annual average of the estimated reductions over the crediting period (tonnes of CO₂ e)	4,922



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A.4.4. Public funding of the small-scale project activity:

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No public funding from parties included in Annex – I is involved in the project activity

A.4.5. Confirmation that the small-scale project activity is not a debundled component of a large scale project activity:

According to Appendix C, paragraph 2 of Simplified Modalities & Procedures for small scale CDM project activities, a proposed small-scale project activity shall be deemed to be a debundled component of a large project activity if there is a registered small-scale CDM project activity or an application to register another small-scale CDM project activity:

- By the same project participants;
- In the same project category and technology/measure; and
- Registered within the previous 2 years; and
- Whose project boundary is within 1 km of the project boundary of the proposed small-scale activity at the closest point.

The project activity qualifies for the use of simplified modalities and procedures for small-scale CDM project activities as there is no small scale project within the same project category and technology/measure in the distance of 1 km of the project boundary by JSL.


SECTION B. Application of a baseline and monitoring methodology
B.1. Title and reference of the approved baseline and monitoring methodology applied to the small-scale project activity:

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Title: Energy efficiency and fuel switching measures for industrial facilities.(AMS II.D. Version 10, EB 33)

Reference: Indicative simplified baseline and monitoring methodologies for small-scale CDM project activity categories

B.2 Justification of the choice of the project category:

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As per the ‘Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories’ project activity falls under

Type II - Energy efficiency improvement projects

Project Category II.D. - Energy efficiency and fuel switching measures for industrial facilities, (Ver 10, EB 33)

This category comprises any energy efficiency and fuel switching measure implemented at a single industrial or mining and mineral production facility. This category covers project activities aimed primarily at energy efficiency; a project activity that involves primarily fuel switching falls into category III.B. Examples include energy efficiency measures (such as efficient motors), fuel switching measures (such as switching from steam or compressed air to electricity) and efficiency measures for specific industrial or mining and mineral production processes (such as steel furnaces, paper drying, tobacco curing, etc.). The measures may replace, modify or retrofit existing facilities or be installed in a new facility. The aggregate energy savings of a single project may not exceed the equivalent of 60 GWh_e per year. A total saving of 60 GWh_e per year is equivalent to a maximal saving of 180 GWh_{th} per year in fuel input.

The project activity fulfils all the requirements of the applied methodology in ensuing manner:

1. The project activity is implemented in single industrial facility i.e. JSL, Mundra, Kutch.
2. The project activity is an energy efficiency measure that replaces wet scrubbing system with DDS for the cleaning of the gases emanating from blast furnace. The use of DDS in place of wet scrubbing system saves considerable amount of sensible heat which otherwise would have been lost in case of wet scrubber system. The project activity does not involve any fuel switching measures



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- The aggregate energy savings from the project is less than 180 GWh_{th} per year in fuel input as shown below:

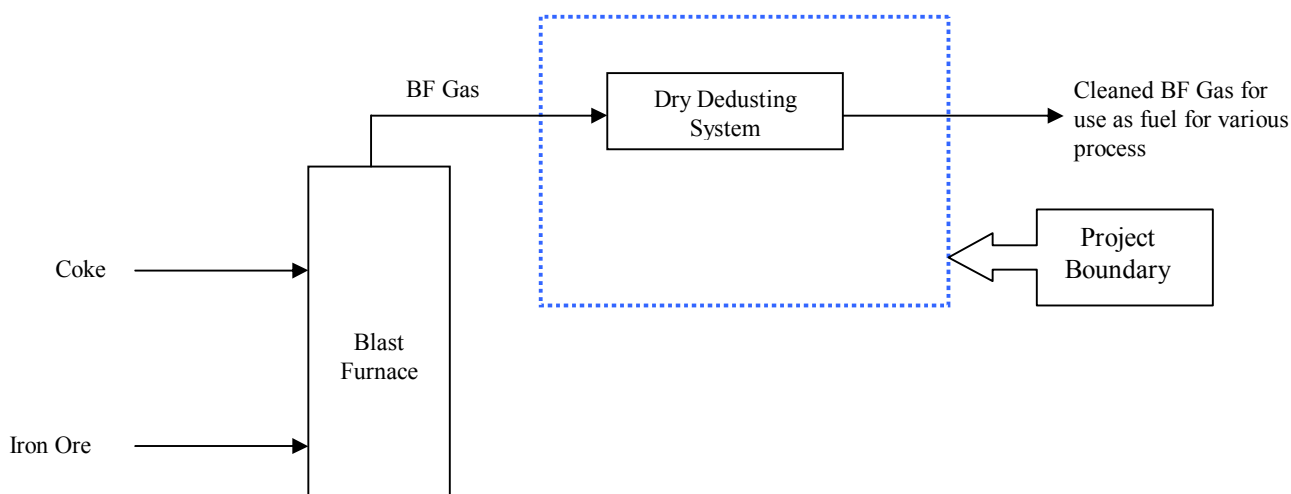
Parameter	Description	Value	Unit
V _o	Volumetric Flow Rate (Normal condition)	84000	m ³ /hr
T _{op}	Outlet Temperature of Clean gas (Project Case)	115	°C
T _{ob}	Outlet temperature of clean gas (Base case)	45	°C
C _p	Specific heat of BF gas	1.03	KJ/kg/°C
Q _y	Incremental Thermal energy of BF gas	7.57	GJ/hr
Q _y	Incremental Thermal energy of BF gas	17.66	GWh _{th}

Thus the project activity of JSL fits the above limitation as it comprises of energy efficiency measures implemented at the site.

B.3. Description of the project boundary:

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As per the guidelines provided in the paragraph 2 of approved methodology (Type II.D, version 10, EB 33).The project boundary encompasses the physical, geographical site of the renewable generation source. The project boundary is as shown below.



B.4. Description of baseline and its development:

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As per the guidelines provided in paragraph 3,4 and 5 of approved methodology (Type II.D, version 10, EB 33), baseline is defined as:-

- In the case of replacement, modification or retrofit measures, the baseline consists of the energy baseline of the existing facility or subsystem that is replaced, modified or retrofitted. In the case of a new facility the energy baseline consists of the facility that would otherwise be built.



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2. In the absence of the CDM project activity, the existing facility would continue to consume energy (EC_{baseline} , in GWh/year) at historical average levels ($EC_{\text{historical}}$, in GWh/year), until the time at which the industrial or mining and mineral production facility would be likely to be replaced, modified or retrofitted in the absence of the CDM project activity ($DATE_{\text{BaselineRetrofit}}$). From that point of time onwards, the baseline scenario is assumed to correspond to the project activity, and baseline energy consumption (EC_{baseline}) is assumed to equal project energy consumption (EC_y , in GWh/year), and no emission reductions are assumed to occur.
3. Each energy form in the emission baseline is multiplied by an emission coefficient (in $\text{kgCO}_2\text{e/kWh}$). For the electricity displaced, the emission coefficient is calculated in accordance with provisions under category I.D. For fossil fuels, the IPCC default values for emission coefficients may be used.

The baseline as per the project category is as follows:

1. The project activity involves replacement of the wet scrubbing system with a DDS. The use of a wet scrubber would have resulted in outflow of low temperature blast BF gases reducing the sensible heat and thereby leading to requirement of more BF gas for process requirement. Thus the baseline is the amount of sensible heat lost in the wet scrubbing system in comparison to the DDS in the absence of the project activity.
2. Also, the wet scrubbing system is the conventional technology being used in the steel sector. The existing system has a considerable technical life time and is therefore, not likely to be replaced, in the absence of the project activity, within the crediting period. Thus, the wet scrubbing system would serve as baseline during the entire crediting period.
3. The baseline emissions is the heat lost by the wet scrubbing system multiplied by the CO_2 emission factor as obtained from the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.¹

B.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered small-scale CDM project activity:

In accordance with paragraph 28 of the simplified modalities and procedures for small-scale CDM project activities, a simplified baseline and monitoring methodology may be used for a small-scale CDM project activity if project participants are able to demonstrate to a designated operational

¹ Kindly refer section B.6.2

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entity that the project activity would otherwise not be implemented due to the existence of one or more barrier(s) listed in Attachment A of Appendix. B.

Attachment A of appendix B states that project participants shall provide an explanation to show that the project activity would not have occurred anyway due to at least one of the following barriers:

- a) Investment Barriers
- b) Technological Barriers
- c) Barrier due to prevailing Practice
- d) Other Barriers

Technological Barrier

JSL being an energy conscious organization explored opportunities for energy saving and considered that good potential exists in conserving the sensible heat BF gases by installing DDS and there are possibilities to effectively utilize this energy further and subsequently save thermal energy. However, the DDS poses following technological risks over the wet scrubbing system.

Because of the increasing pressure, temperature and volume of raw gas the DDS is exposed to extreme conditions. Complications can occur due to the variation of temperature of gases coming from blast furnace to DDS. The technology used consists of bag dedusting system which operates normally at 200⁰C and can stand upto 250⁰C.If the temperature goes above 250⁰C, the bag can be damaged. Thus, temperature reducing methods would have to be adopted instantly to avoid any damage to the DDS.

On the other hand, if the temperature of incoming BG gases is less than 100⁰C, dewing phenomenon may happen and can cause blockage inside filter bag and affect the dust discharging. This would also reduce the effective filter area and reduce the efficiency of the system. Further the dedusting bags of the system will have to be replaced regularly for the optimal operation of the DDS. No such replacement activity would have been required in case of a wet scrubbing system.

The discharging from dust hopper and intermediate bin is not synchronous hence operational controls for dedusting system had to be adopted so that the whole system can be kept running optimally. Any technical problem associated with temperature control, dust hopper and intermediate bin synchronization or operation control measures can effect the whole plant operations. Therefore, the project activity faces significant technological barriers that would not have been there in the absence of the project activity i.e use of wet scrubbing system.



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Barrier due to prevailing practice

The DDS at JSL uses the advance concept of dry dedusting of BF gases to retain their sensible heat which would have been lost in wet scrubbing system. The innovative concept is implemented keeping in mind that the amount of thermal energy saved could be used for other processes in the plant thus reducing the overall energy requirement of the system.

The project activity is not a prevailing practice in the steel sector of the region and unique in its nature in the regional steel industries. Conventionally wet scrubbers are used for cleaning the BF gases. The BF gases from the wet scrubber system are then heated to a certain temperature before they could be used further in the process.

In spite of above discussed barriers, JSL has undertaken this GHG abatement project under Clean Development Mechanism (CDM). The CDM fund will use for additional coverage to the risk due to failure of project and to mitigate the other unseen problems. Also it would definitely encourage other organisations to come up with similar project activities contributing further towards GHG emission reductions.

B.6. Emission reductions:

B.6.1. Explanation of methodological choices:

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Project emissions (PE_y)- There will be no project emissions due to the implementation of the project activity, hence there will be no GHG emissions associated with it.

Baseline emissions- The baseline emissions are calculated as per the formula given below:

$$BE_y = Q_y \times EF_y$$

Where,

BE_y Baseline emissions due to energy loss by wet scrubber system in the year y (t CO₂)

Q_y Thermal energy of the clean gas obtained from DDS in year y (TJ / yr)

EF_y Emission factor for BF gases in the year y (t CO₂ / TJ)

Furthur

$$Q_y = m \times C_p \times (T_{op} - T_{ob})$$

m Mass flow rate of BF gases in normal conditions (Kg / hr)

C_p Specific heat of blast furnace gases at constant pressure(kJ/ Kg /⁰C)

T_{op} Clean gas temperature obtained from DDS in project case (⁰C)

T_{ob} Clean gas temperature obtained from wet scrubbing system in base case (⁰C)



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Where,

$$m = V_{BF} \times \eta_{BF}$$

V_{BF} Volumetric flow rate of BF gases (m³ / hr)

η_{BF} Density of Blast furnace gases (Kg / m³)

Leakage emissions(Leakage_y) - As per the Paragraph 5 of the methodology AMS II.D, leakages is to be considered if the energy generating equipment is transferred from another activity or if the existing equipment is transferred to another activity. There is no transfer of energy generating equipment or existing equipment to another activity.

Emission Reductions (ER_y)

The emission reduction by the project activity is calculated as the difference between the baseline emission and the sum of the project emissions and the leakage.

$$ER_y = BE_y - (PE_y + Leakage_y)$$

ER_y Emission reduction in the year “y” (tCO₂e)

B.6.2. Data and parameters that are available at validation:

Data / Parameter:	T_{ob}
Data unit:	⁰ C
Description:	Outlet temperature of cleaned BF gas from wet scrubber in base case
Source of data used:	Design specifications
Value applied:	45
Justification of the choice of data or description of measurement methods and procedures actually applied :	The standard design specifications as given by the equipment supplier has been chosen.
Any comment:	

Data / Parameter:	C_p
Data unit:	kJ/ kg / ⁰ C
Description:	Specific heat of blast furnace gas
Source of data used:	http://www.engineeringtoolbox.com/specific-heat-capacity-gases-d_159.html
Value applied:	1.03
Justification of the choice of data or description of measurement methods and procedures actually	Publicly available source



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applied :	
Any comment:	

Data / Parameter:	EF_y
Data unit:	t CO ₂ / TJ
Description:	Emission factor for residual fuel oil
Source of data used:	2006 IPCC Guidelines for National Greenhouse Gas Inventories, table 1.4, page 23
Value applied:	77.4
Justification of the choice of data or description of measurement methods and procedures actually applied :	IPCC default value
Any comment:	

Data / Parameter:	η_{BF}
Data unit:	Kg/m ³
Description:	Density of the BF gas
Source of data used:	http://www.engineeringtoolbox.com/gas-density-d_158.html
Value of data	1.25
Justification of the choice of data or description of measurement methods and procedures actually applied :	
Any comment:	

B.6.3 Ex-ante calculation of emission reductions:

>>

Baseline Emissions (BE_y)

BE_y	=	Q_y	*	EF_y
tCO ₂ / year		TJ / year		tCO ₂ / TJ
4,922	=	63.59	*	77.4

Project Emissions (PE_y)- There would be no GHG emissions due to the project activity within the project boundary. Thus there are no anthropogenic emissions due to the project activity within the project boundary.

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Leakage Emission (Leakage_y)- Leakage estimation is only required if renewable energy technology is equipment transferred from another activity. This is not applicable to the project case, hence no leakage estimation is required.

Emission Reductions (ER_y):

ER_y	=	BE_y	-	PE_y	-	Leakage
tCO ₂		tCO ₂		tCO ₂		tCO ₂
4,922		4,922	-	0.0	-	0.0

The project activity will therefore result in a total reduction of **49,220** over the 10 years crediting period.

B.6.4 Summary of the ex-ante estimation of emission reductions:

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Year	Project activity emissions (tCO ₂ e)	Baseline emissions (tCO ₂ e)	Leakage (tCO ₂ e)	Emission reductions (tCO ₂ e)
2007-08	0	4,922	0	4,922
2008-09	0	4,922	0	4,922
2009-10	0	4,922	0	4,922
2010-11	0	4,922	0	4,922
2011-12	0	4,922	0	4,922
2012-13	0	4,922	0	4,922
2013-14	0	4,922	0	4,922
2014-15	0	4,922	0	4,922
2015-16	0	4,922	0	4,922
2016-17	0	4,922	0	4,922
Total (tonnes of CO₂e)	0	49,220	0	49,220

B.7 Application of a monitoring methodology and description of the monitoring plan:

B.7.1 Data and parameters monitored:

Data / Parameter:	T_{op}
Data unit:	⁰ C
Description:	Outlet temperature of cleaned BF gas in the project case
Source of data to be used:	Log books
Value of data	115
Description of measurement methods and procedures to be	Outlet temperature of BF gas in the project case would be measured in the plant premises using the online thermocouple.



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applied:	
QA/QC procedures to be applied:	This parameter is monitored continuously and logged in log sheets for every shift. Based on the logged data daily report would be prepared by Shift in charge. The thermocouple used for the measurement of the temperature would be calibrated once in the year by standard calibration procedure.
Any comment:	The data will be archived until 2 year after the crediting period or the last issuance of CER for this project activity; which ever occurs later.

Data / Parameter:	V_o
Data unit:	m ³ /hr
Description:	Volumetric Flow rate of BF gas
Source of data to be used:	Log sheets
Value of data	84,000
Description of measurement methods and procedures to be applied:	Flow rate meters
QA/QC procedures to be applied:	This parameter is monitored continuously and logged in log sheets for every shift. Based on the logged data and a report is prepared by Shift in charge. The flow rate meters used would be calibrated once in the year by standard calibration procedure.
Any comment:	The data will be archived until 2 year after the crediting period or the last issuance of CER for this project activity; which ever occur later.

B.7.2 Description of the monitoring plan:

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As per paragraph 7 & 8 of AMS II.D methodology (Version 10, EB 33).

In case of replacement, modification and retrofit measures the monitoring shall consist of:

- (a) Documenting the specifications of the equipment replaced;
- (b) Metering the energy use of the industrial, mining or mineral production facility, processes or the equipment affected by the project activity;
- (c) Calculating the energy savings using the metered energy obtained from subparagraph (b).

In case of new facility, monitoring shall consist of:

- (a) Metering the energy use of the equipment installed;
- (b) Calculating the energy savings due to the equipment installed

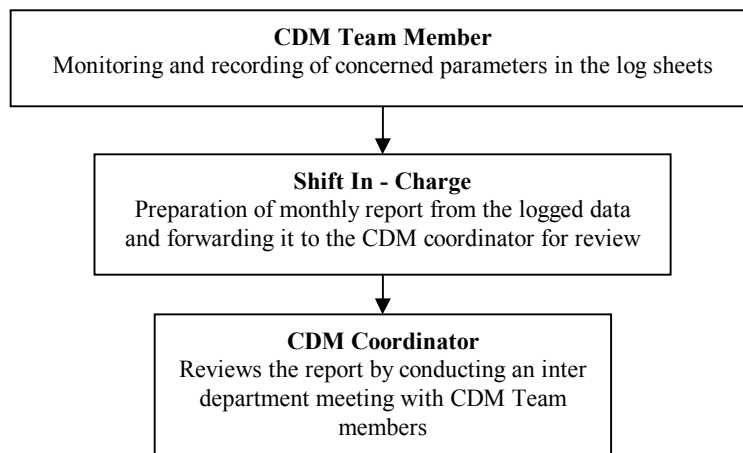
Since the project is the energy efficiency project, the emission reduction of the project activity depends on the amount of sensible heat conserved. The monitoring plan shall include the monitoring and measurement of the key project parameters affecting emission reductions. The project will have monitoring of outlet temperature and flow rate of BF gases from DDS enabling



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the calculation of net sensible heat savings. The CDM Coordinator is responsible for monitoring and archiving of data required for estimating emission reductions. He would be supported by the shift in-charge who would continuously monitor the data logging and would generate daily, monthly and annual reports.

The responsibilities for and institutional arrangements for data collection and archiving is as shown below



B.8 Date of completion of the application of the baseline and monitoring methodology and the name of the responsible person(s)/entity(ies)

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Date of completion of base line and monitoring methodology: DD/MM/YY

09/08/07

Name of person/entity determining the baseline:

Jindal Saw Limited

The entity is also a project participant listed in Annex 1 of this document.



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SECTION C. Duration of the project activity / crediting period

C.1 Duration of the project activity:

C.1.1. Starting date of the project activity:

>>

30/09/06

C.1.2. Expected operational lifetime of the project activity:

>>

20y-0m

C.2 Choice of the crediting period and related information:

The project activity uses a fixed crediting period of 10 years.

C.2.1. Renewable crediting period

C.2.1.1. Starting date of the first crediting period:

>>

Not Applicable

C.2.1.2. Length of the first crediting period:

>>

Not Applicable

C.2.2. Fixed crediting period:

C.2.2.1. Starting date:

>>

10/11/07

The crediting period shall start after the registration of the project activity as a CDM project activity with UNFCCC.

C.2.2.2. Length:

>>

10y-0m

**SECTION D. Environmental impacts**

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D.1. If required by the host Party, documentation on the analysis of the environmental impacts of the project activity:

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The ministry of Environment and forests(MoEF),Government of India,under the environment impact Assessment Notification vide S.O.60(E)² dated 27/01/94 has listed a set of industrial activities in Schedule I of the notification which for setting up new projects or modernization /expansion will require environmental clearance and will have to conduct an Environmental Impact Assessment(EIA) study.

JSL does not require EIA to be conducted as the activity is not included in schedule I. Article 12 of the Kyoto Protocol requires that a CDM project activity contributes to the sustainable development of the host country. Assessing the project activity's positive and negative impacts on the local environment and on society is thus key element for each CDM project.

The project activity conserves sensible heat of BF gases which would have been lost in absence of the project activity. The project activity reduces industrial water demand by offsetting the wet scrubbing system. The project activity leads to energy efficiency and GHG emission reduction. The project activity has no significant adverse impacts on – air, land, water.

D.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party:

>>

There are no significant adverse environmental impacts due to the project activity.

² [http://www.envfor.nic.in/legis/eia/so-60\(e\).html](http://www.envfor.nic.in/legis/eia/so-60(e).html)

**SECTION E. Stakeholders' comments**

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E.1. Brief description how comments by local stakeholders have been invited and compiled:

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The local stakeholder comment invitation and compilation process involved is as follows:

The local stakeholders are those who face the immediate effect due to the project activities which involves effect on the local environment, social life and economics. They can be within the boundaries of the village, district, state or nation.

On deciding above criteria for qualification of the stakeholders, the following were called for the stakeholders meeting :

- Equipment Supplier
- Employees of JSL

JSL had conducted the stakeholder consultation process at the project activity site. Among the people present were employees of the organisation and suppliers.

The queries raised by the local stakeholders were answered and subsequently recorded during the meeting by the Company representative.

E.2. Summary of the comments received:

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No adverse comments for the project activity were received during the stakeholder consultation. The proposed project activity being a energy efficiency project, employees expressed satisfaction about the energy efficiency project. They also agreed that the project activity would reduce energy consumption of the plant and also would help in GHG abatement. Concern regarding pollution associated with project activity was raised by few stakeholders. The representatives of JSL explained that DDS unit would help in reducing GHG emissions. Also, it would reduce the quantity of water that would have been used in wet scrubber in base case.

E.3. Report on how due account was taken of any comments received:

>>

No significant adverse comments have been received for the project activity. In view of various direct and indirect benefits (social, economical, and environmental), no concerns were raised during the consultation with stakeholders.



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Annex 1**CONTACT INFORMATION ON PARTICIPANTS IN THE PROJECT ACTIVITY**

Organization:	Jindal Saw Limited
Street/P.O.Box:	12, Bhikaji Cama Place
Building:	Jindal Centre
City:	New Delhi
State/Region:	New Delhi
Postfix/ZIP:	110066
Country:	India
Telephone:	+91-11-26188360
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Annex 2

INFORMATION REGARDING PUBLIC FUNDING

No public funding from Parties included in Annex I is availed for this project activity.



CDM – Executive Board

Annex 3

BASELINE INFORMATION

As per section B.4



Annex 4

MONITORING INFORMATION

As per section B.7.2