## (i) Unit Profile

Durgapur Steel Plant, one of the SAIL's integrated plants, was set up in the late 50's with the capacity of 1.0 MT of liquid steel per annum. In the late 60's the capacity of the plant was increased to 1.6 MT per annum. To eliminate constraints being faced by the plant and to upgrade its performance a modernization project was launched in 1989. The project has employed state of the art technology for all round improvement. The production in 07-08 has been 2.186 MT in gross hot metal against the capacity of 2.350 MT for crude steel 1.916 MT against the capacity of 1.802 MT. The plan for the year 2008-09 is 2.400 MT of hot metal, 2.193 MT of crude steel.

## (ii) Energy Consumption

The integrated steel plant consumes by-product fuels like BF gas, CO gas and BOF gas for Coke Oven battery under firing. Sinter plant furnaces, Blast Furnaces. Stoves, steam generating high pr. Boilers, Soaking pits, Re-heating Furnaces. Of Rolling Mills and the aux. Shops, Blast Furnaces. Uses coke which is supplied by Coke Oven by carbonising coking coal in the ovens. Boiler Coal is used in steam generating high pr. Boilers. The plant imports electricity from DVC & NSPCL to meet the power requirement. The balanced sp. Energy consumption for the year 2007-08 was 6.8548 Gcal/TCS.

## (iii) Energy Conservation Commitment, Policy and Organizational Set up

DSP's commitment towards conservation of Energy is a continuous one. To further bring down consumption of energy from the present level, certain action plans have been formulated, some of which are :

1. To bring down coke rate below 490 Kg/THM (excluding nut coke) through intensification of operating parameters of Blast Furnaces.
2. Substantial reduction in boiler coal consumption by proper utilization of the by-product Fuels of the plant.
3. To arrest wastage of energy.

The plant has a full fledged division in the organization committed to energy conservation , headed by Dy. General Manager reporting to G.M. (Utilities). A working group of 15 Executives consisting of AGM, Sr. Mgrs., Managers, Dy. Managers, Asst. Managers & Jr. Managers are placed in the department monitoring of generation and distribution of by-pdt. fuels is done round the clock. Moreover an energy conservation group of 2 executives exists headed by an AGM to take care of the energy conservation activities.

**(iv) Energy Conservation Achievements**

In the past 3 years an investment of Rs543.39 Lakhs has been made on short term basis with an intention to bring down the wastage of generated energy specially in the form of steam and different by-product gases. All these are in addition to the long term measures taken like installation of bloom caster, CDI in Blast Furnaces etc.

**(v) Energy Conservation Plans and Targets**

By adopting different energy conservation measures like 100% casting through Continuous Casters, use of Torpedo Ladles etc. target for Sp. Energy Consumption has been planned about 6.3 G.Cal / tcs (Total) by 2009 -10.

**(vi) Environment and Safety**

DURGAPUR STEEL PLANT is adhering to the environment norm for the modernized part but up-gradation of the old plant of the sixties is also continuously being done to satisfy the environment norm as committed to the society. In Coke Oven, cross flue leakages to arrest pollution from chimney is being continuously attended. A BOD plant has been put into operation to take care of liquid effluents. In the old Sinter Plant, Bag Filters are installed & maintained. Majority of the solid arising are being consumed in the process itself. A group of Thermo-technique people monitors the combustion of different furnaces / boilers to ensure proper combustion to improve environment. The plant has a full fledged environment monitoring department headed by Deputy General Manager.

Safety is a continuous activity to generate awareness & rectify unsafe practices, if any, by a full fledged department headed by General Manager. The plant maintains gas lines of 17 Kms., 3 Gas holders & other gas hazardous equipments Energy Management deptt. ensures Gas Safety round the clock & clearance to work on such gas hazardous equipments. It is by dedicated effort of the department that gas related accident is minimum in DURGAPUR STEEL PLANT.

Figure 1. **PROCESS FLOW CHART: DURGAPUR STEEL PLANT**