

ThyssenKrupp Electrical Steel India Private Limited **(Formerly EBG India Private Limited)**





1. COMPANY PROFILE

ThyssenKrupp Electrical Steel India Private Limited (Formerly EBG India Private Limited), a wholly owned subsidiary of **ThyssenKrupp Steel**, Duisburg, Germany, was formed to bring latest technology of Electrical Steel to the Asian sub continent in September 2000.

Electrical steel - a modern strategic steel product of national importance for electrical systems - is our core business.

We produce and supply, **PowerCore** grain-oriented and non-oriented electrical steel produced in India as well as in our electrical steel manufacturing group companies in Germany, Italy and France.

In India, **ThyssenKrupp Electrical Steel India Private Limited** is the only company offering entire range of aging free and energy conserving electrical steel for energy efficient electrical equipment.

ThyssenKrupp Steel group companies produce over 1 million tons of electrical steel and are number 1 in Europe and number 2 worldwide.

We also produce special qualities of carbon steel products to be able to offer our customers in Automotive, White Goods, A/C and Refrigeration, Electrical Equipment industries etc. a total package of electrical steel as well as carbon steel for different applications.

Quality and environment management systems of **ISO 9001** and **ISO 14000 certification**, updated to latest revision, ensure our efficiency, the quality of our products outperforming national and international standards and a responsible treatment of environmental issues.

Complete R&D infrastructure and a team of Application Engineering experts make **ThyssenKrupp Electrical Steel India Private Limited** a solution provider. We provide optimum solutions by offering specific grade for specific application and thereby reducing the global cost by avoiding over engineering.

The continuous feedback by our Sales and Application Team enable us to develop tailor made products for specific applications right from fractional horsepower motors to very large capacity motors and generators.

ThyssenKrupp Electrical Steel India Private Limited is a market leader in India and enjoys long term trust and business association of all our customers in India as well as worldwide.

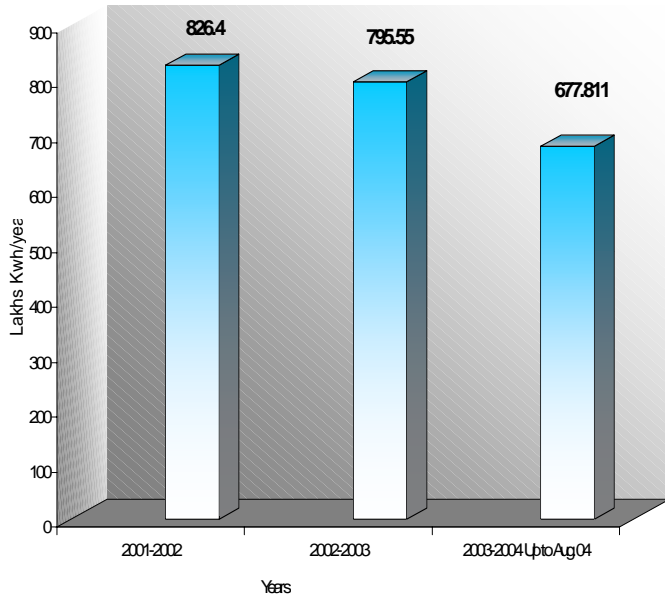
2. ENERGY CONSUMPTION

DESCRIPTION	UNIT	2001-2002	2002-2003	2003-2004
Annual Steel Production	MT	182649	211008	174025
Total Electricity consumed	kWh	82640000	79555000	67781100
Specific Energy Consumption - Electrical	kWh / MT	444	374	385
Total Thermal (fuel) Energy consumed	Mill. K Cal	97939	95380	82425
Specific Energy Consumption - Thermal (fuel) Energy	Kcal / MT	536213	452020	473637
YEAR	ELECTRICITY	THERMAL (FUEL)		

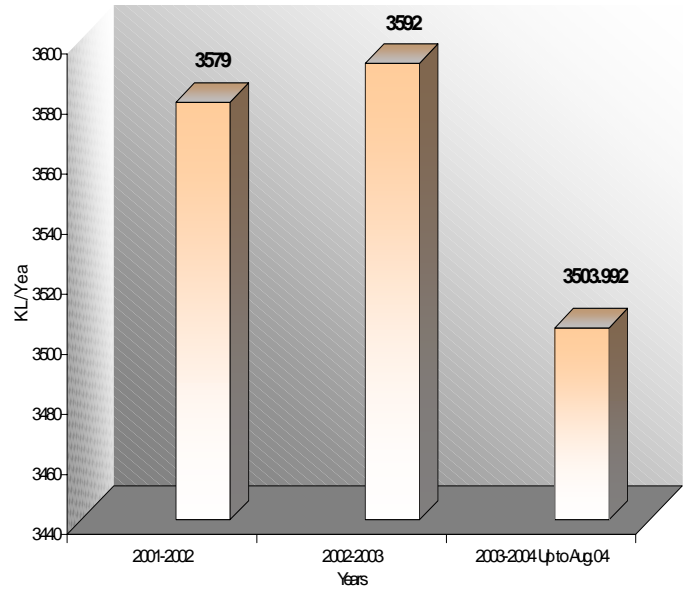


	Consumption kWh / MT	% Reduction over 2001-2002	Consumption Kcal / MT	% Reduction over 2001-2002
2001-2002	444	0.00 %	536213	0.00 %
2002-2003	374	15.76 %	452020	15.70 %
2003-2004	385	13.29 %	473637	11.67 %

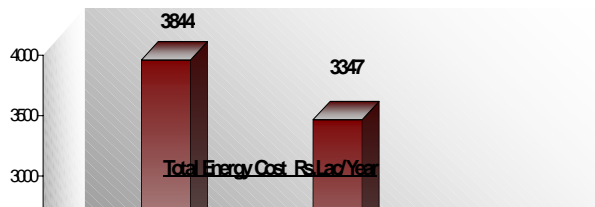
Total consumption of Electricity (Lakhs Kwh/year)



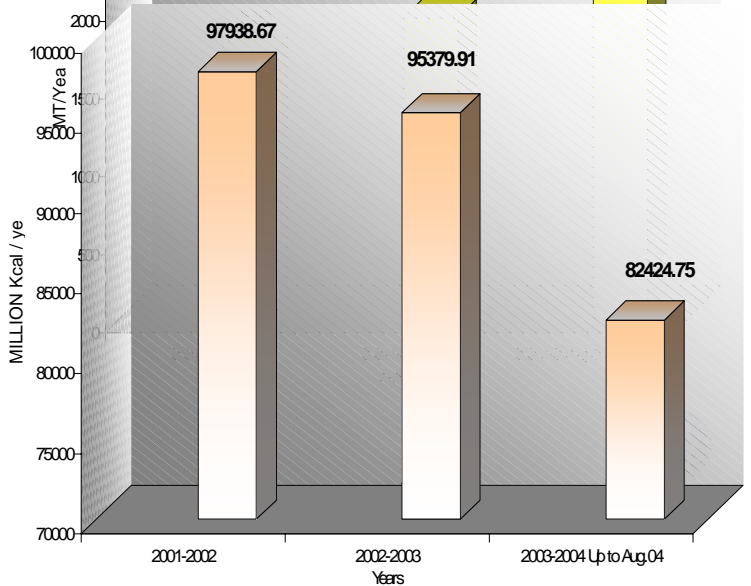
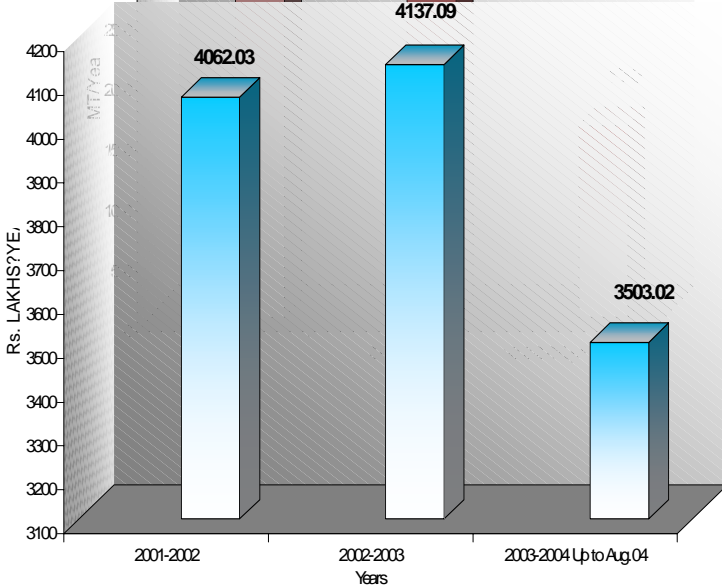
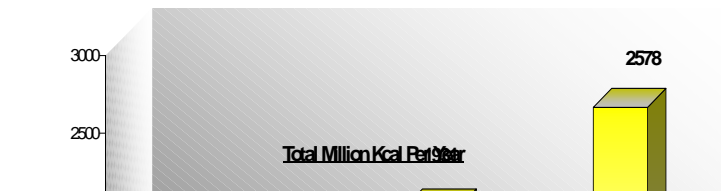
Furnace Oil consumption (KL/Year)



Naphtha consumption (MT/Year)



LPG consumption (MT/Year)



3. ENERGY CONSERVATION COMMITMENT

TKES is committed to Total Energy Management and Prevention of energy wastage. Awareness & involvement of people at all levels has been a major plan for implementation of ENCON measures. TKES India believes not only in implementing latest Energy Conservation Techniques to achieve the target but also to sustain the same by providing adequate training and awareness on the project implemented. The ENCON activities are monitored by a well-structured setup called the **ENCON Core Group**. The cell continuously monitors the Encon activities and reports the achievements to the Top Management on a periodic basis. As a continued effort towards achieving excellence in the field of energy conservation, an Energy Policy, has been formulated at TKES, which reflects the commitments of the top management towards conservation of energy, resources & environment. This commitment has enabled the company to reduce specific energy consumption on continual basis.

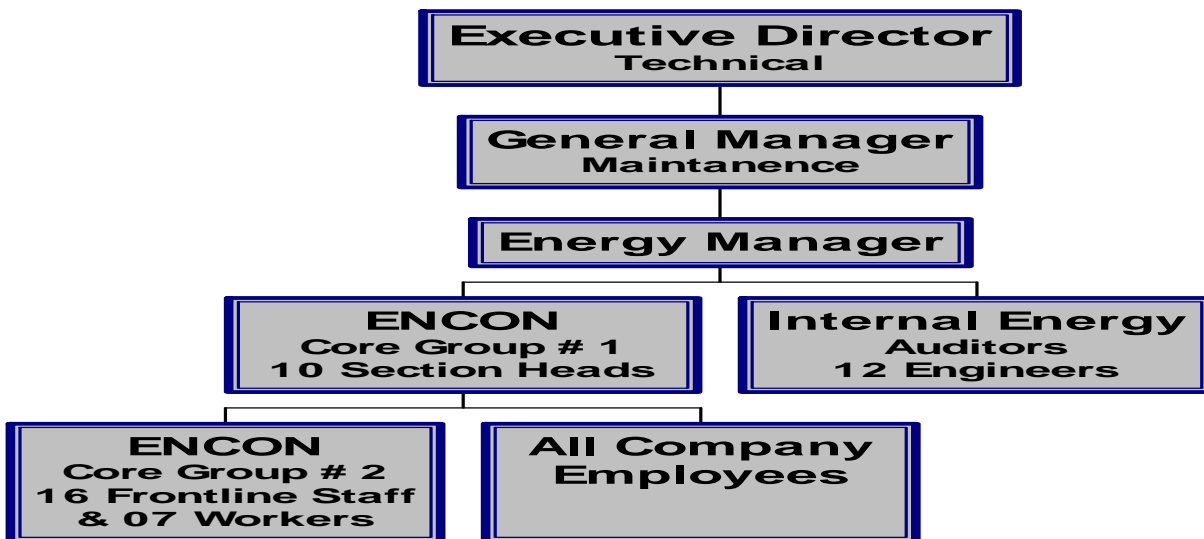
4. ENERGY POLICY (Copy attached at the end of this Annexure)

TKES India Pvt. Ltd., is committed to conserve the use of Electrical Energy and Fuel

1. By using cost effective and energy efficient alternatives/ equipment and waste heat recovery methods in a planned manner.
2. Optimizing energy consumption at every stage of operation by
 - Effective operation and maintenance practices.
 - Setting energy norms for every stage of operation.
 - Periodic monitoring and review.
 - Training of employees in energy conservation practices.
3. By benchmarking the energy consumption norms with group and other similar companies.
4. By active participation and consultation with CII and other similar institutes.
5. By carrying out regular energy audits to identify areas of improvement.
6. Sustain energy efficiency gains by establishing and maintaining a management information system designed to support managerial decision making.

This will be achieved through dedicated teamwork, participation and commitment from employees at all levels and ensured by ENCON core group.

ORGANIZATION STRUCTURE OF ENERGY MANAGEMENT CELL



4. ENERGY CONSERVATION ACHIEVEMENTS

# 1 Name of the Project >> Use of proper capacity motor for Hot Air Dryer TADL	
Consumption before implementation	35 kWh
Consumption after implementation	22 kWh
Net power saved	13 kWh / hr
Potential saving/annum	Rs. 300303
Net saving	Rs.275278
Net Investment	Spare motor used from other area
Date of Implementation	Oct 03



# 2 Name of the Project >> Lighting transformer for colony area lighting	
Consumption before implementation	23 kWh
Consumption after implementation	20 kWh
Net power saved	3 kWh / hr
Potential saving/annum	Rs.455223
Net saving	Rs.227612
Net Investment	Rs. 80,000
Date of Implementation	Mar 04





# 3	Name of the Project >> Energy Efficient Motor for Compressor
Consumption before implementation	181 kWh
Consumption after implementation	178 kWh
Net power saved	3 kWh / hr
Potential saving/annum	Rs. 68511
Net saving	Rs. 17128
Net Investment	Rs. 457760 (Spare against three nos.)
Date of Implementation	Jun 04



# 4	Name of the Project >> VFD for Pickling Line Hot Air Dryer
Consumption before implementation	20 kWh / hr (Running) & 20 kWh / hr (Idle)
Consumption after implementation	17 kWh / hr (Running) & 4 kWh / hr (Idle)
Net power saved	3 kWh / hr (Running) & 16 kWh / hr (Idle)
Potential saving/annum	Rs. 138516
Net saving	Rs.11543
Net Investment	Rs. 1,10,000
Date of Implementation	Aug 04





# 5 Name of the Project >> Maintaining Unity power factor	
Power factor incentive (for 2004)	Rs. 110,00,000
Net Investment	Rs. 1,40,000
Auto switching of fixed load at individual station. Online monitoring of PF at main receiving station. Addition & deletion of capacitor bank in sub-station as per load.	




5. ENERGY CONSERVATION PLANS AND TARGETS



Energy Conservation Measures Planned	Anticipated Savings In Energy (Rs. Lac)	Approx. Investment (Rs. Lac)	Project Start Year	Project End Year

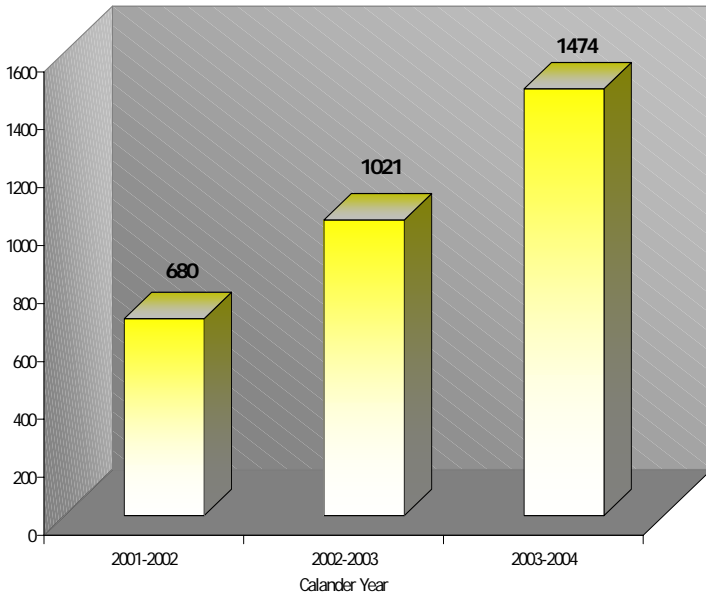
Replacement of panel indication lamps and push buttons with LED indication lamps – 1900 nos.	0.87	1.52	2004-05	2004-05
Cooling tower fan control by sensing return water temperature	2.00	0.20	2004-05	2004-05
Combustion Efficiency improvement at Bell annealing Furnace	2.67	0.00	2004-05	2004-05
Replacement of 40W FTL at WCs with 8/12 CFL – 75 nos.	0.12	0.15	2004-05	2004-05
On-line oxygen analyzer for boiler efficiency improvement	3.91	1.5	2004-05	2004-05
Interconnecting piping for air compressor between Mill 1 and Mill 2	19	3.6	2004-05	2004-05
Energy efficiency motor for cooling tower	1.13	3.95	2004-05	2004-05
Appropriate capacity motor for Naphtha unloading pump	4.84	0.77	2004-05	2004-05
VFD V-31 Blower at ARP	4.90	6.00	2004-05	2004-05
Magnet for LPG saving at TADL heating zone	9.00	15.30	2004-05	2004-05
High velocity air for Mill wiping	31.95	8.00	2004-05	2004-05
TOTAL	80.39	40.99		

6. ENVIRONMENT AND SAFETY

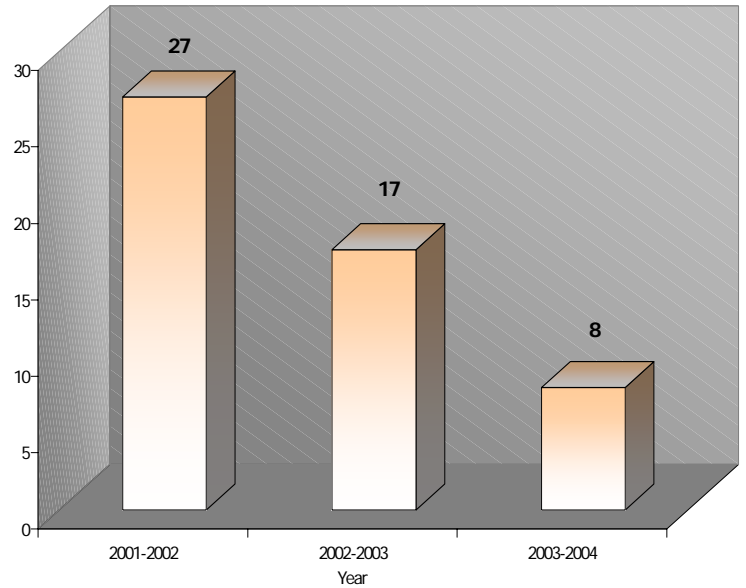
- Housekeeping cost Rs. 40 Lac/annum
 - Development of green belt in & around the factory
 - Segregation & stacking of scrap & waste material at the source.
 - The company is not only ensuring full compliance with environmental standards and statutory norms but also able to maintain its emission levels much below the standards.
 - TKES as responsible corporate citizen remains committed for better and heal their environment as a part of its corporate Philosophy.
 - It is also vital that undue strain on natural resources are not placed for only than one can safeguard the long term prospects for business.
 - ThyssenKrupp Electrical Steel India Pvt. Ltd. has achieved ISO – 14001: 1996 without guidance of external agency in the month of Sept. '03.
 - In-plant waste segregation at source has helped in systematic and proper transit storage for further disposal of hazardous waste.
 - For the disposal of hazardous waste, ThyssenKrupp Electrical Steel India Pvt. Ltd. has become the member of Mumbai Waste Management Ltd., Taloja that is Pollution control Board approved agency having the Common Hazardous Waste Storage and Disposal Facility.
 - Complaints related to environment major or minor if any from neighborhood locality is attended on war footing and steps are immediately taken to prevent the occurrence in future.
 - Board showing hazardous waste quantity, storage and disposal has been displayed at the main gate entrance of the company as required by the Pollution Control Board.
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- All parameters related to air and water (ETP) are well within limits as laid down by Pollution Control Board.
 - In compliance with the statutory and legal requirements we have efficiently functioning Acid Regeneration and Effluent Treatment Plant.
 - Plantation activities are taken up through the year about 8000 trees have been planted till date.

➤ Treated water from ETP is reused in the process.

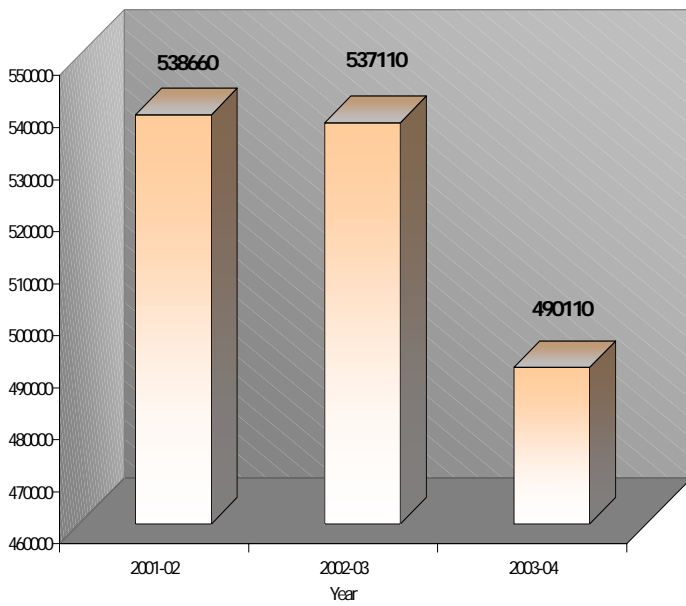
Safety Awareness Training (Hrs/year)



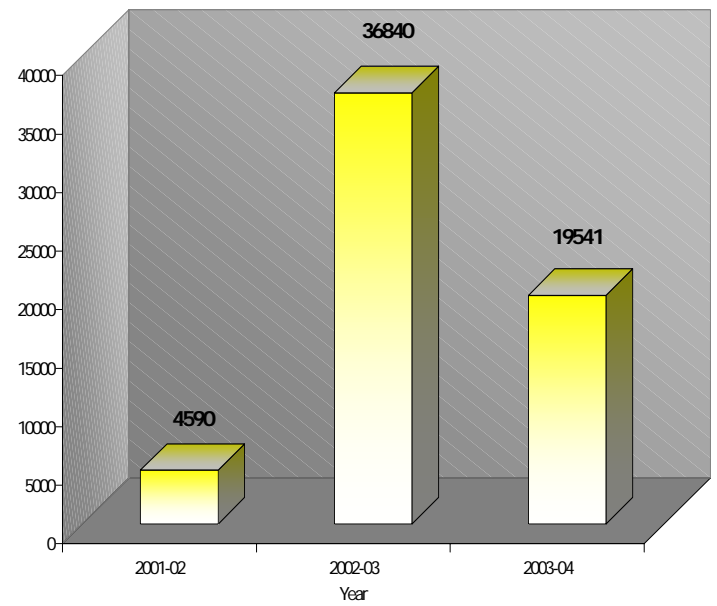
Number of Accidents



Raw Water Consumption (KL/year)



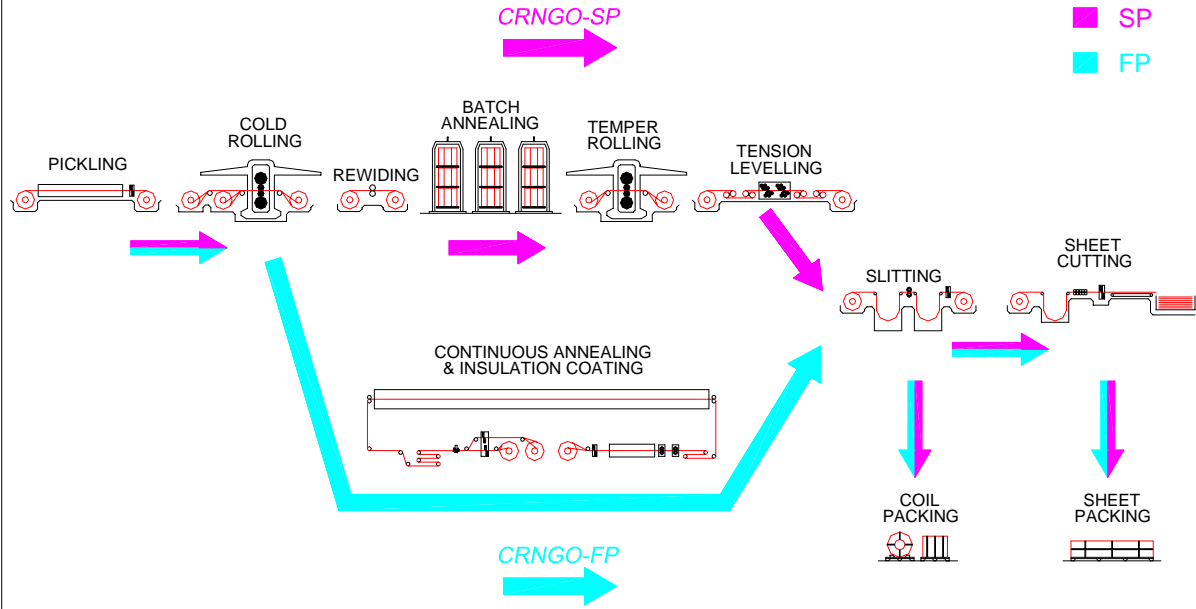
Treated water Reused (KL/year)



ENERGY POLICY

ENOUGH IS NOT ENOUGH FOR ENERGY CONSERVATION

Material Flow for
Semi Processed (SP) and Fully Processed (FP) Material



Material Flow for
Mild Steel (CRCA) and Full Hard Material (CRFH)

