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   OBJECTIVES

   HYPOTHESES

   RESEARCH METHODOLOGY

   RESULTS & DISCUSSION

   FINDINGS

   RECOMMENDATIONS/SUGGESTIONS

   CONCLUSIONS

   SCOPE FOR FURTHER RESEARCH

   ACKNOWLEDGMENTS

   REFERENCES

   APPENDIX/ANNEXURE

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CONTRIBUTIONS TO BOOKS

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

JOURNAL AND OTHER ARTICLES

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

CONFERENCE PAPERS

- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

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- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, KurukshetraUniversity, Kurukshetra.

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- Garg, Bhavet (2011): Towards a New Natural Gas Policy, Political Weekly, Viewed on January 01, 2012 http://epw.in/user/viewabstract.jsp

COMPARATIVE STUDY AND NUMERICAL MODELING OF A CUPOLA FURNACE WITH HOT WIND

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ABSTRACT

The cupola furnace is a vertical furnace used in iron and steel industry for the fusion of ferrous metals in order to obtain liquid cast iron, from a prototype set up by the Higher Teacher training school of Technical Teaching, (cupola furnace with hot wind), in this study, we evaluated the parameters characteristic of the system in order to determine the melting point of the cupola furnace. The made proposals related to:

1- *Determination of the convection coefficient by the exchange of temperature in the cupola furnace (simulation with software MATLAB) and the proposal for some technological modifications.*
2- *the choice of a refractory material: the materials proposed presents a strong thermal inertia and locally has the advantage of being available.*
3- *The process of fusion: it is about the injection of oxygen and carbon on the level of the conduits during combustion; one thus improves heat exchange in the cupola furnace and one decreases the quantity of fuel used; much more the cast iron obtained is of better quality.*

This furnace also presents an environmental stake because it can be average of valorization of the local biomass; the study is completed on the use potential of certain local fuels in the place of metallurgical coke. (fossil fuel is very pollutant) in this cupola furnace.

KEYWORDS
Cupola furnace with hot wind, cupola furnace with cold wind, blast furnace, thermal convection coefficient, mass fuel.

INTRODUCTION

The keen cast iron demand throughout the world involved a significant increase in its production during ten last years [1]. This increase in the production led all the foundries to become competitive.

World competition thus became such as the current foundries cannot be more allowed to be unaware of technologies conceived to reduce the costs, to improve quality, to increase flexibility and to respect the environment;

It is in this order of idea that it was to propose to us to make a critical and comparative study aiming to the improvement of the performances of the cupola furnace with cold wind carried out at the Higher Teacher training school of Technical Teaching. We thus carried out a critical study of the existing model and to present a series of recommendations aiming to:

- To increase the quality of the process of fusion,
- To increase the capacity of the cupola furnace,
- To reduce consumption of fuel, and fuel gases;

After we suggested techniques allowing to lower the volume of the gas emissions and to make energy saving; the work concerned three parts primarily:

Firstly the presentation of the existing model, in second position we made a critical study of this model compared to the existing model in the literature, thereafter we propose a model based on the principle with hot wind

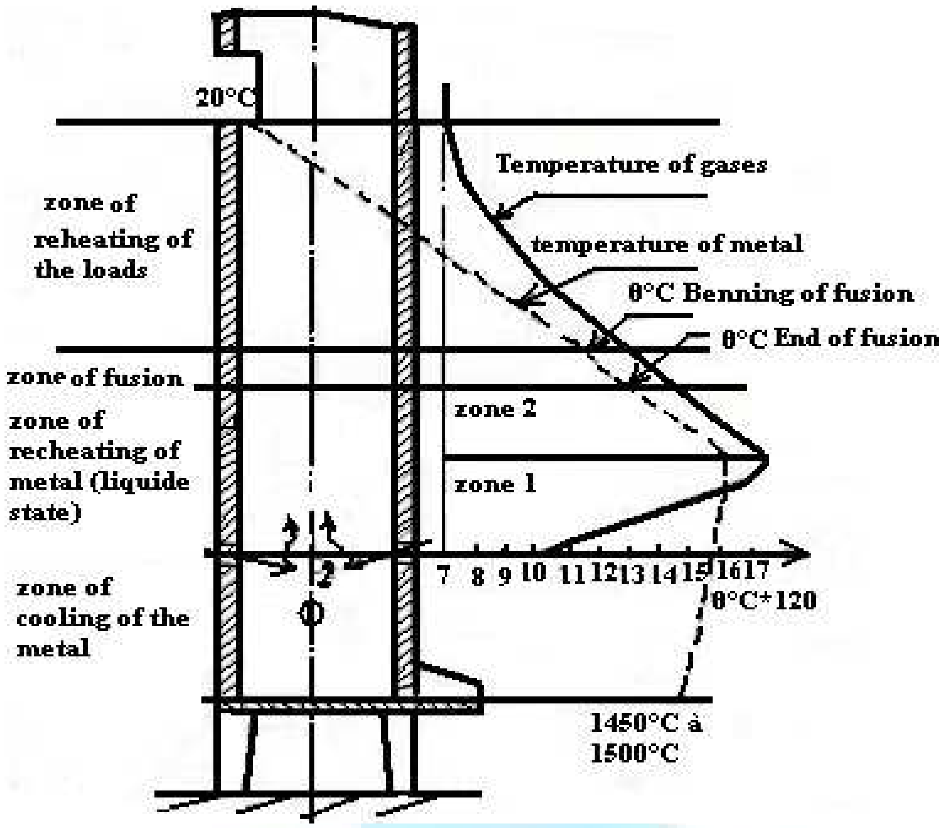
PRESENTATION OF THE EXISTING MODEL (MODEL WITH COLD WIND)

It shows the following characteristics:

- The Wight of the loads is axial;
- it is equipped with a mechanical variable speed transmission giving the aptitude to select the flows while varying the number of revolutions of the ventilator;
- the shape of its tank is truncated;
- collecting of the fume has is done laterally under the loud-voiced person;
- de-dusting partial of the fume is done by passage of the latter inside two boxes of de-dusting, before going to the chimney.
- time production: P = 153,6 kg/h is 0.1536t/h
- volume of pre-heating: V = 38.25L is $38.25x10^{-3}$ m^3
- index of capacity of pre-heating: ICP = 0.25 m^3/T
- Maximum duration of operation (daily): 3 hours
- Flow of wind: of 130m^3/H to 190 m^3/H

Pressure of wind at the exit of the conduits: from 5000 Pa with 6800 Pa

FIG. 1: THERMAL ASPECT OF THE OPERATION OF A CUPOLA FURNACE (WITH COLD WIND)



II_1 Determination of the Parameters of Operation.

a) Requirement out of fuel

Once the designed cupola furnace, it A was necessary to determine the parameters of operation which are as follows:

TABLE 1: MASS OF FUEL TO CHARGE COMPARED TO THE PERCENTAGE OUT OF CARBON

Fuel	Mass (kg)	% of carbon
Coke	17,97	85
Coal of azobé	18,78	74
Nut of cabbage tree	27,90	51

TABLE 2: MASS OF FUEL TO CHARGE COMPARED TO THE NCV

Fuel	Mass (kg)	PCI (kcal/kg)
Coke	17,97	7200
Coal of azobe	18,78	7000
Nut of cabbage tree	27,90	4700

b) Coefficient of convection

The first stage of this work consisted in determining the convection coefficient of gas in the cupola furnace; In the experimental model of the ENSET, one supposes that the convection coefficient had two constant values:

h_1 constant of the level of the conduits to the **h_1=0,005** straw mattress

h_2 constant of the clown on the level of loading (blast furnace). **h_2=0.345**

Using a program written in MATLAB; one could determine a polynomial of interpolation which gives the value of **h** according to the height of the furnace.

For that it was enough to know the value of the convection coefficient into different points of the cupola furnace.

Z	0	40	50	60	70	80	90	100	110	120	130
h	0.005	0.005	0.345	0.285	0.345	0.285	0.345	0.285	0.345	0.285	0.345

The execution of the program gives us the following equation:

II_2 Equation of the convection coefficient according to the height of the cupola furnace.

The polynomial obtained is:

Pour 0<z<40cm **h=0.005**

Pour 40<z<140cm **h= 0.0017z+ 0.1292**

Z being the height of the cupola furnace

One obtains the values of **h** following:

h = 0.005, 0.005, 0.1292, 0.1979, 0.2150, 0.2322, 0.2494, 0.2665, 0.2837, 0.3009, 0.3180, 0.3352, 0.3524, 0.3695.

Once the polynomial obtained the convection coefficient is traced in the following figure:

FIG. 2: CONVECTION COEFFICIENT ACCORDING TO THE HEIGHT

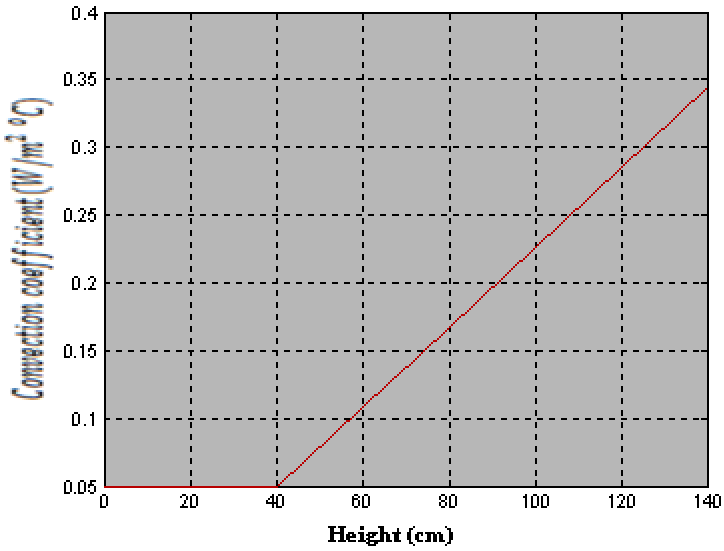
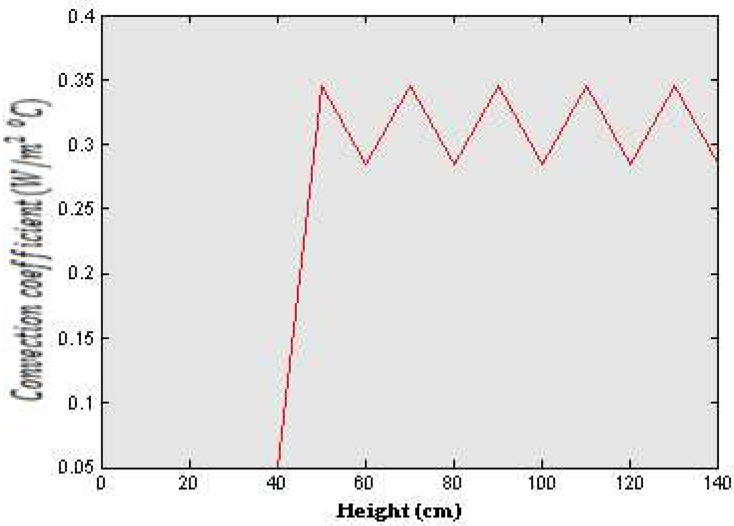


FIG. 3: CONVECTION COEFFICIENT IMPROVED ACCORDING TO THE HEIGHT



III PRESENTATION OF THE NEW MODEL (model with hot wind)

a) Assumptions

To model the operation of the furnace, we limit ourselves to the three last zones; i.e. center of the conduits up to the level of loading.

The study of the evolution of temperature in these three zones following assumptions:

- the temperature is supposed to be homogeneous in the radial direction ;
- the hot gases assemble center of the conduits up to the level of loading at constant speed **Vg**;
- the speed of descent of the load **V** ^{m} of the level of loading until the center of the conduits is constant;
- although the sizes **λ, ρ, C** ^{p} are functions of the temperature, they are considered here constant;
- the solid load consists of only one type of material;
- the thermal losses through the walls of the furnace are neglected;
- the furnace is supposed to be cylindrical, of constant section;

The purpose of this first approach is to give us an idea of about size of a certain number of parameters.

b) Modelling

After materialization of the system, we obtained the heat balance concerning the matter of the cupola furnace below:

$$\lambda_m \left[\left(\frac{\partial\theta}{\partial z_z}\right) - \left(\frac{\partial\theta}{\partial z}\right)_{z+\Delta z} \right] S^* + h(T-\theta)S - V_m \rho_m C_{pm} S^* [\theta(Z) - \theta(z+\Delta z)] = \lambda_m C_m C_{pm} \frac{\partial\theta}{\partial t} S^* \Delta z \qquad \textbf{(1)}$$

By supposing that we are in steady operation,

Then, $\rho_G C_{pG} \frac{\partial T}{\partial t} S \Delta z = 0$ and $\rho_m C_{pm} \frac{\partial\theta}{\partial t} S^* \Delta z = 0$

And the preceding system becomes:

$$\lambda_G \left[\left(\frac{\partial T}{\partial z}\right)_z - \left(\frac{\partial T}{\partial z}\right)_{z+\Delta z} \right] S - h(T-\theta)S' + V_G \rho_G C_{PG} S [T(z) - T(z+\Delta z)] = 0 \qquad \textbf{(2)}$$

$$\lambda_m \left[\left(\frac{\partial\theta}{\partial z}\right)_z - \left(\frac{\partial\theta}{\partial z}\right)_{z+\Delta z} \right] S^* - h(T-\theta)S' + V_m \rho_m C_{Pm} S [\theta(z) - \theta(z+\Delta z)] = 0 \qquad \textbf{(3)}$$

In order to improve quality of the cast iron produced by the furnace, it is necessary to find T=T(z) and θ= θ(z); but these two functions depend of the rate of D-carburetion in produced metal. To solve the system, we proceed as follows:

We suppose known the gas-matter exchanges h(T-θ)S according to the height; i.e. in each step Δz, nose of the conduits to the loud-voiced person ;
We choose one of the equations ***(3)*** and let us discredited it; by using the method the finite differences **[2]**, **[3]**
Thus, let us discredited the equation, one can write:

$$\lambda^{m}\left(\frac{S^{*}}{\Delta z}\right)\left[(\theta^{k}-\theta^{k-1})-(\theta^{k+1}-\theta^{k})\right]+h(T^{k}-\theta^{k})S^{\cdot}$$

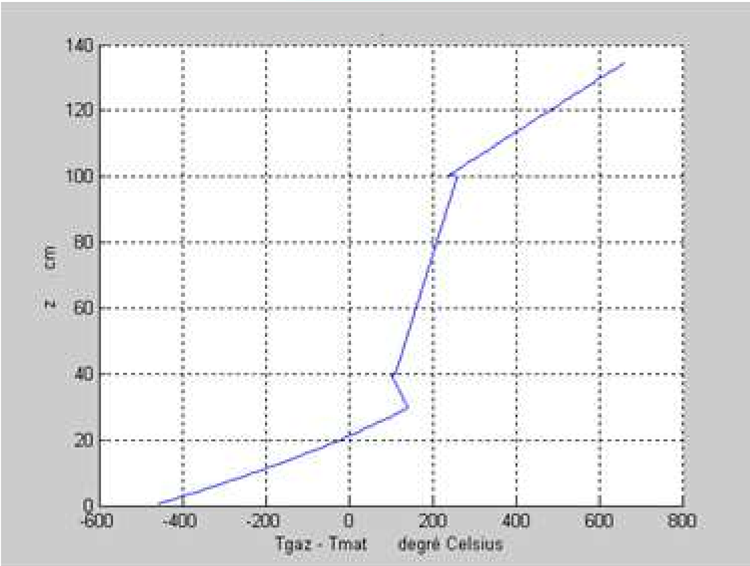
Or $S^{*}=(1-\varepsilon)S^{tot}$ et $S^{\cdot}=\sigma\Delta z S^{tot}$;
The equation becomes;

$$\lambda^{m}\left((1-\varepsilon)\frac{S^{tot}}{\Delta z}\right)\left[(\theta^{k}-\theta^{k-1})-(\theta^{k+1}-\theta^{k})\right]+h(T^{k}-\theta^{k})\sigma\Delta z S^{tot}-V_{m}\rho_{m}C_{pm}(1-\varepsilon)S^{tot}[\theta_{k-1}-\theta_{k}]=0$$

Soit : $\lambda^{m}\left(\frac{(1-\varepsilon)}{\Delta z}\right)(-\theta^{k-1}+2\theta^{k}-\theta^{k-1})+h\sigma\Delta z(T^{k}-\theta^{k})-V_{m}\rho_{m}C_{pm}(1-\varepsilon)[\theta_{k-1}-\theta_{k}]=0$ **(4)**

- The equation being discredited, we write a law of variation of $T^{k}-\theta^{k}$ according to k ; for that we impose an operation of the furnace similar to that presented in **[4]** where a in experiments checked law of variation of $T^{k}-\theta^{k}$ is given.

FIG 4: EVOLUTION OF THE DIFFERENCE IN TEMPERATURE BETWEEN GAS AND MATERIAL FOLLOWING THE HEIGHT



It any more but does not remain us to determine certain sizes speakers in the constants A, B^{k} and C; equation ***(5)*** of these values are given by the originator of the furnace are consigned in the following table 5.

TABLE 5: SOME SIZES DEPENDENT FOR THE USE OF THE TYPES OF FUELS

Fuel	Specific surface of exchange (σ)	Speed of descent loads (Vm)	Index of the vacuum (ε)	Height of Straw mattress HP
Coke	$72\ m^{2}/m^{3}$	0,000285m/s	0,56	40 cm
Coal of azobé	$68\ m^{2}/m^{3}$	0,000975m/s	0,50	47 cm
Nut of cabbage tree	$54\ m^{2}/m^{3}$	0,000715 m/s	0,44	58 cm

PROGRAM RESOLUTION

Having thus the values of the various constants, the equation that is:

$$A(-\theta^{k-1}+2\theta^{k}-\theta^{k+1})+B^{k}f^{k}-C(\theta^{k-1}-\theta^{k})=0 \quad (5)$$

$$-A\theta^{k-1}+2A\theta^{k}-A\theta^{k+1}+B^{k}f^{k}-C\theta^{k-1}+C\theta^{k}=0$$

Soit: $$(A+C)\theta^{k-1}-(2A+C)\theta^{k}+A\theta^{k+1}=B^{k}f^{k} \quad (6)$$

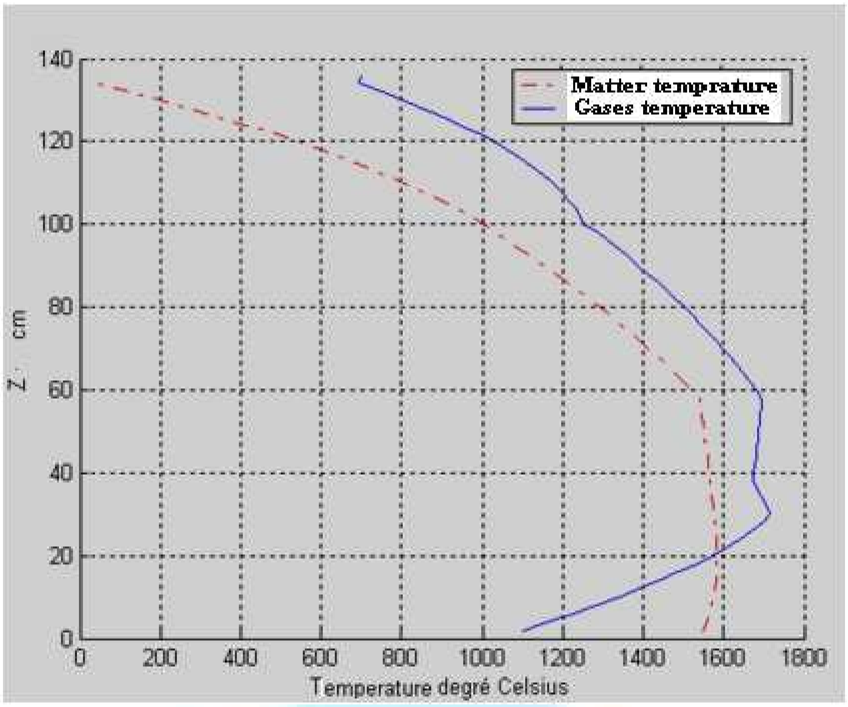
It is a matrix system with K going of 2 up to 68. The boundary conditions are:

θ^{68} = 25 °C inlet temperature of the loads and

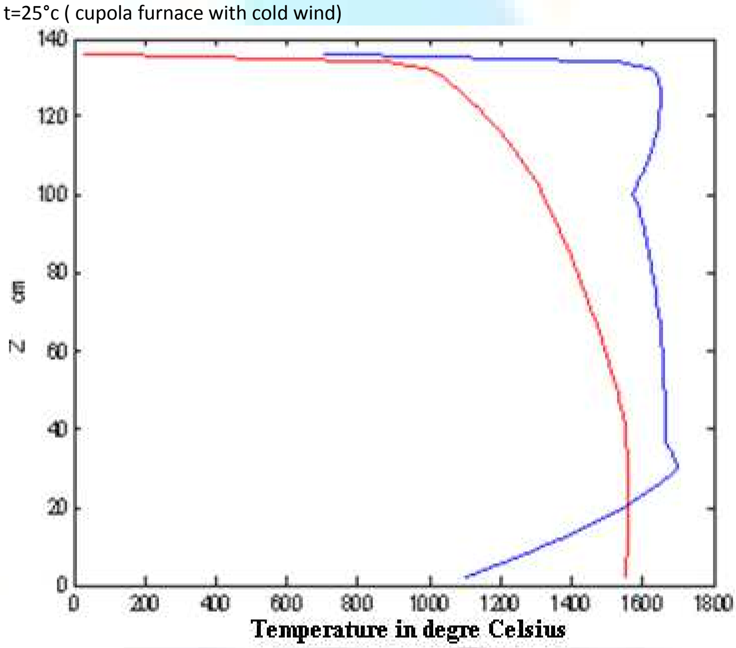
θ^{1} = 1550°C temperature of the matter at the level of the conduits
- Inlet temperatures of gases T° entry =450°C
- Temperature of exit of the gases T° left =750°C

The curves obtained after simulation are:

FIG 5: CHANGE OF THE TEMPERATURE OF THE LOAD AND GAS ACCORDING TO THE HEIGHT



a): Temperature of entree of gases: t=25°c (cupola furnace with cold wind)



b): Temperature of entree of gases: t=450°c (cupola furnace with hot wind)

INTERPRETATION OF THE RESULTS

The curve presents two zones:

1- A zone of pre-heating during which the temperature increases very quickly
2- A zone of fusion which occurs almost at constant temperature (1600°C)

In addition the temperature of end of fusion increases; it passes from 1450 °C (cupola furnace with cold wind) with approximately 1600°C.

These results show that the heat brought by hot gases was used to preheat the metal loads from where fast increase in the temperature of the loads in the first zone;

More heat brought is significant plus fusion is faster; this decreases not only the time of fusion but also the requirements out of fuel as well as the height for straw mattress;

On the other hand in a cupola furnace with cold wind fusion is progressive and slow; from where a significant contribution out of fuel and heat.

The increase in the temperature at the entry of the conduits is used for pre-heating of the metal load and decreases the time of fusion; it also makes it possible to obtain a cast iron at the end of the fusion with a higher temperature; this can support the addition of the alloy elements such silicon and others; energy saving thus is carried out because part of the heat rejected into nature (case of a cupola furnace with cold wind) is thus recovered (cupola furnace with hot wind). Therefore the cupola furnace with hot wind is more economic energizing.

GENERAL CONCLUSION

The work which was entrusted to us was a critical and comparative study cupola furnace with cold wind ,With the sight of the technological developments sudden by the cupola furnace these last decades we proposed certain improvements entitled to succeed to make significant energy saving and especially to improve the output of the experimental cupola furnace;

It acts in particular:

- Passage of the cupola furnace with cold wind with a cupola furnace with hot wind; this technology makes it possible to accelerate fusion and especially to standardize the temperature in the heart of mixture
- The installation of a recuperate of energy at the exit of the blast furnace; this installation makes it possible to make significant energy saving.
- The injection of oxygen and the carbon during the combustion drives thus to the reduction of the quantity of the fuel used and the gotten melting is good quality
- This cupola furnace also presents an environmental stake because it can be a means of cleansing our environment by the recovery of scrap and waste;

However several modifications can still be made with an aim of improving its output after that a modeling and a simulation of the operation of this cupola furnace is necessary when oxygen is added and of carbon.

Our study does not have the claim to be completed but the implementation of these proposals can lead to prototype economy energy and especially reducing the pollutant emissions in the atmosphere.

REFERENCES

1. Techniques simples de carbonisation ...Données techniques et économiques www.fao.org/docrep/x5328f00.htm du (09/03/2010)
2. Yves Jannot, Transferts thermiques, 2003, 158 pages
3. BOUVENOT, A, (1981), Transferts de chaleur, Masson.
4. fr.wikipedia.org/wiki/fusion-acquisition du (16/01/2010)

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Thanking you profoundly

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