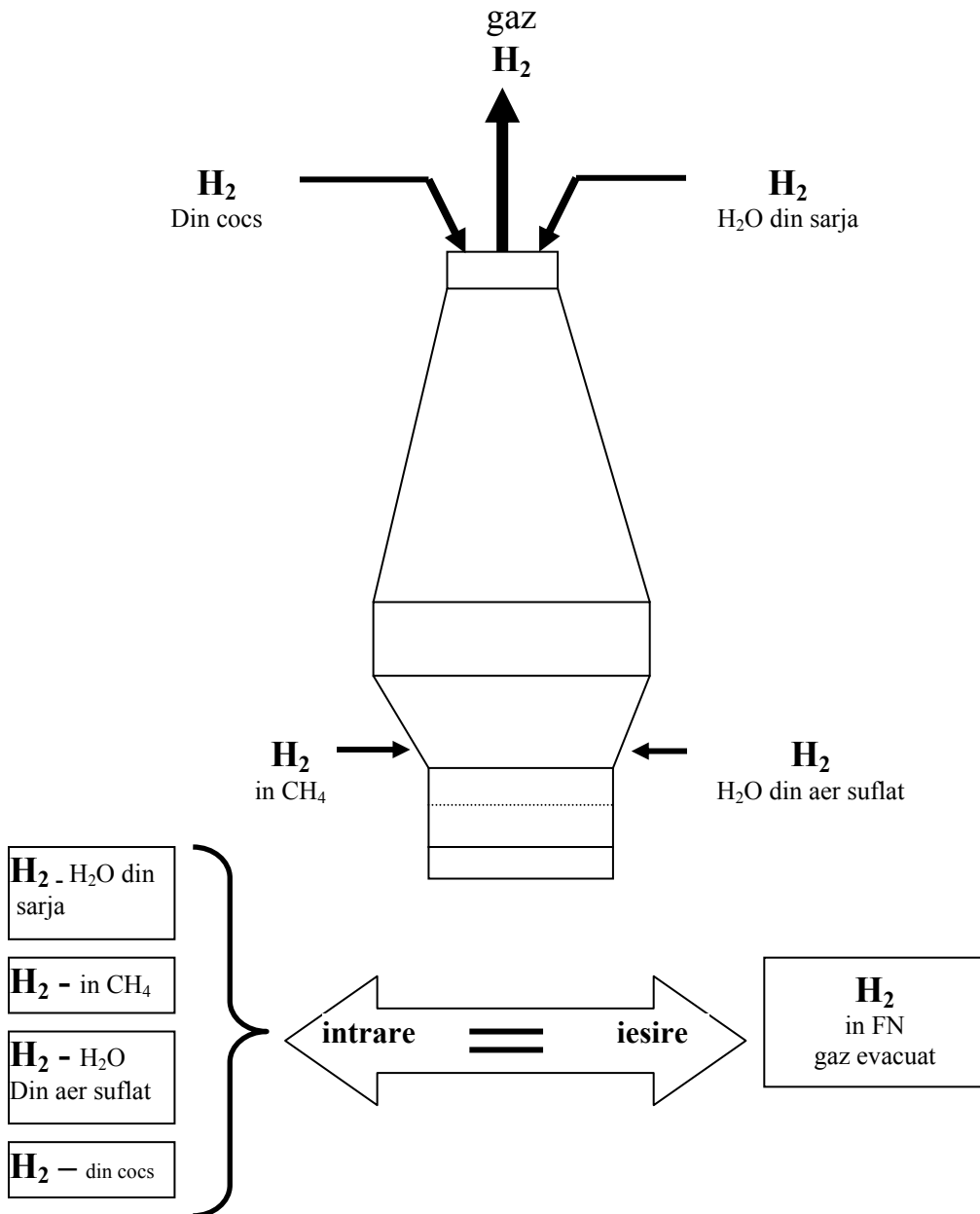
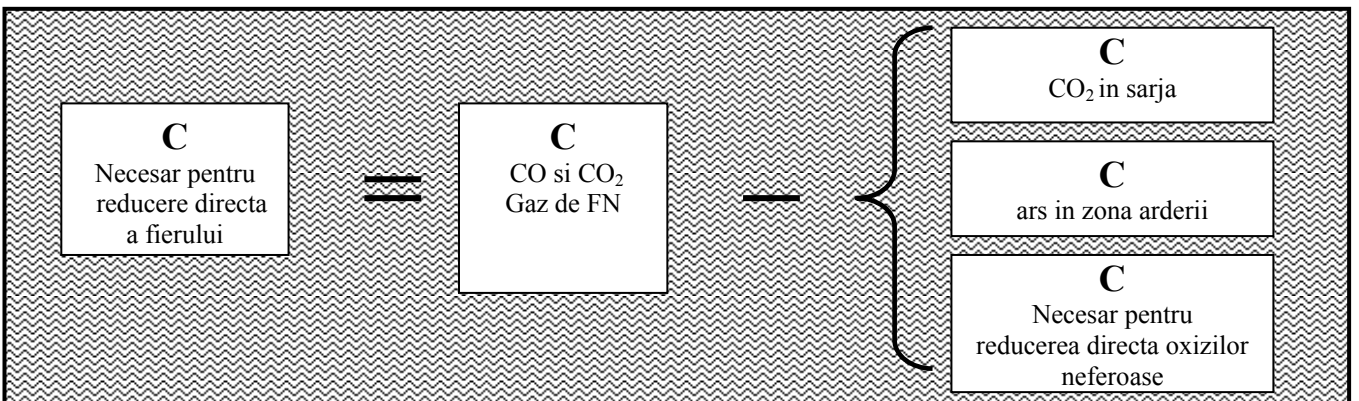
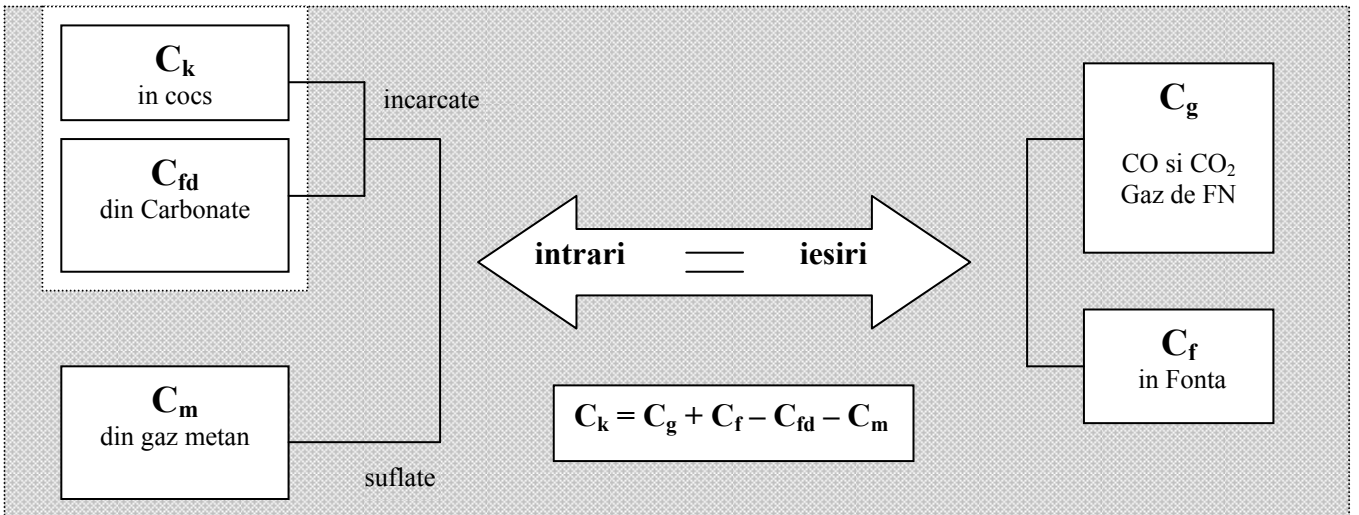
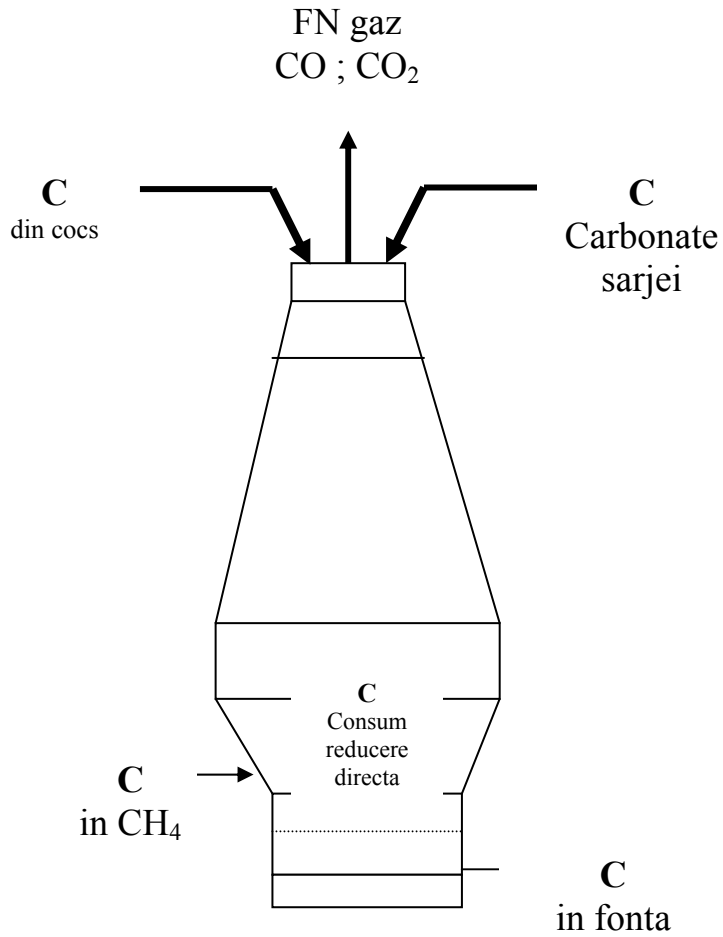


Bilantul hidrogenului

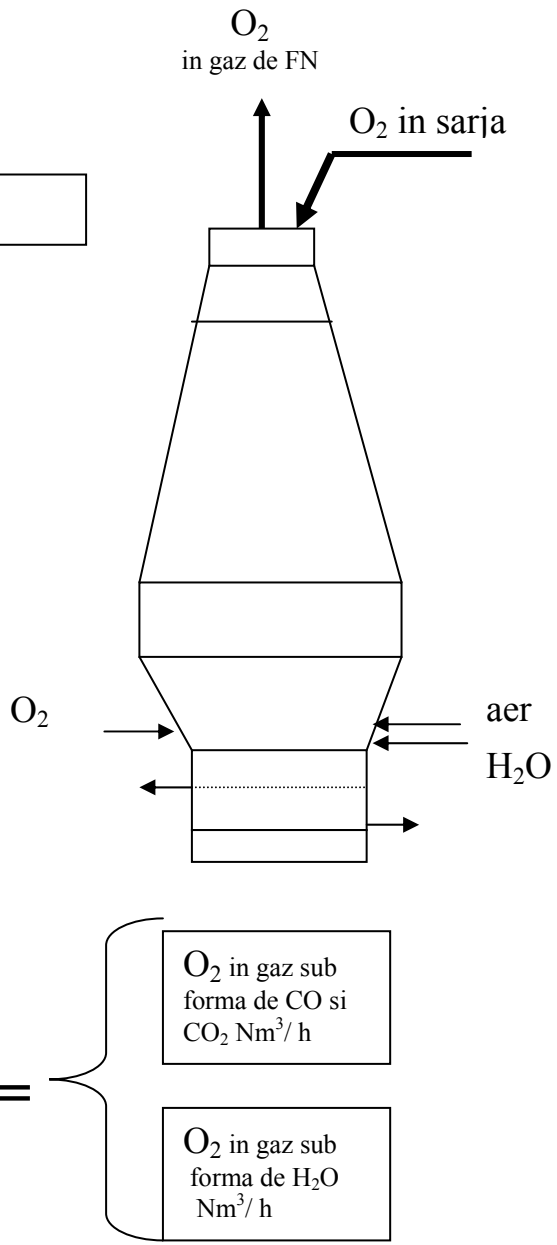
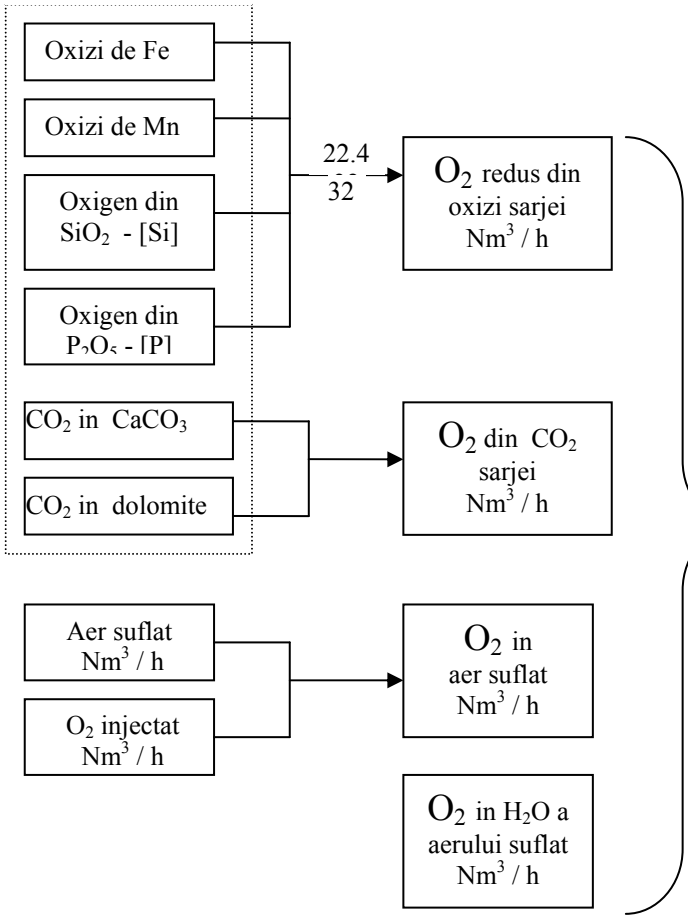


Bilantul Carbonului



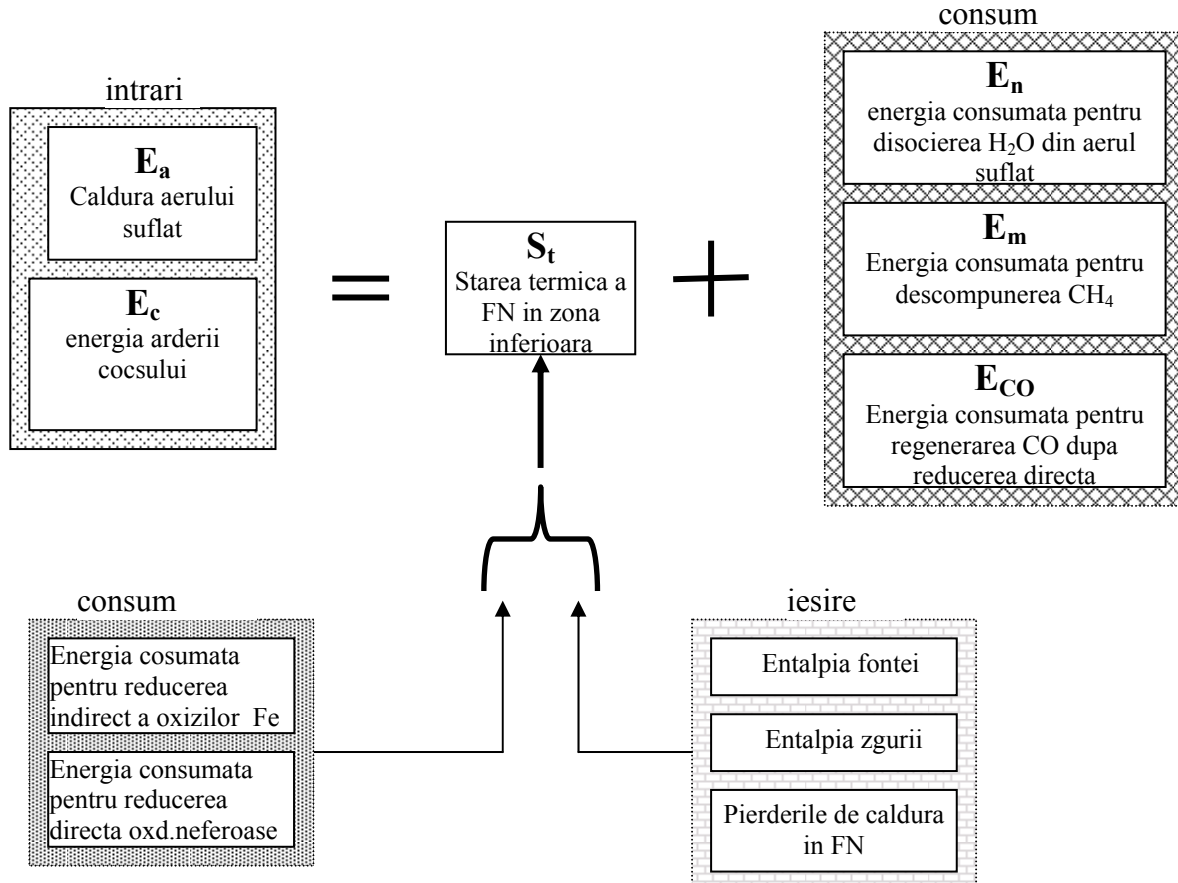
Bilantul oxigenului

Stoichiometric



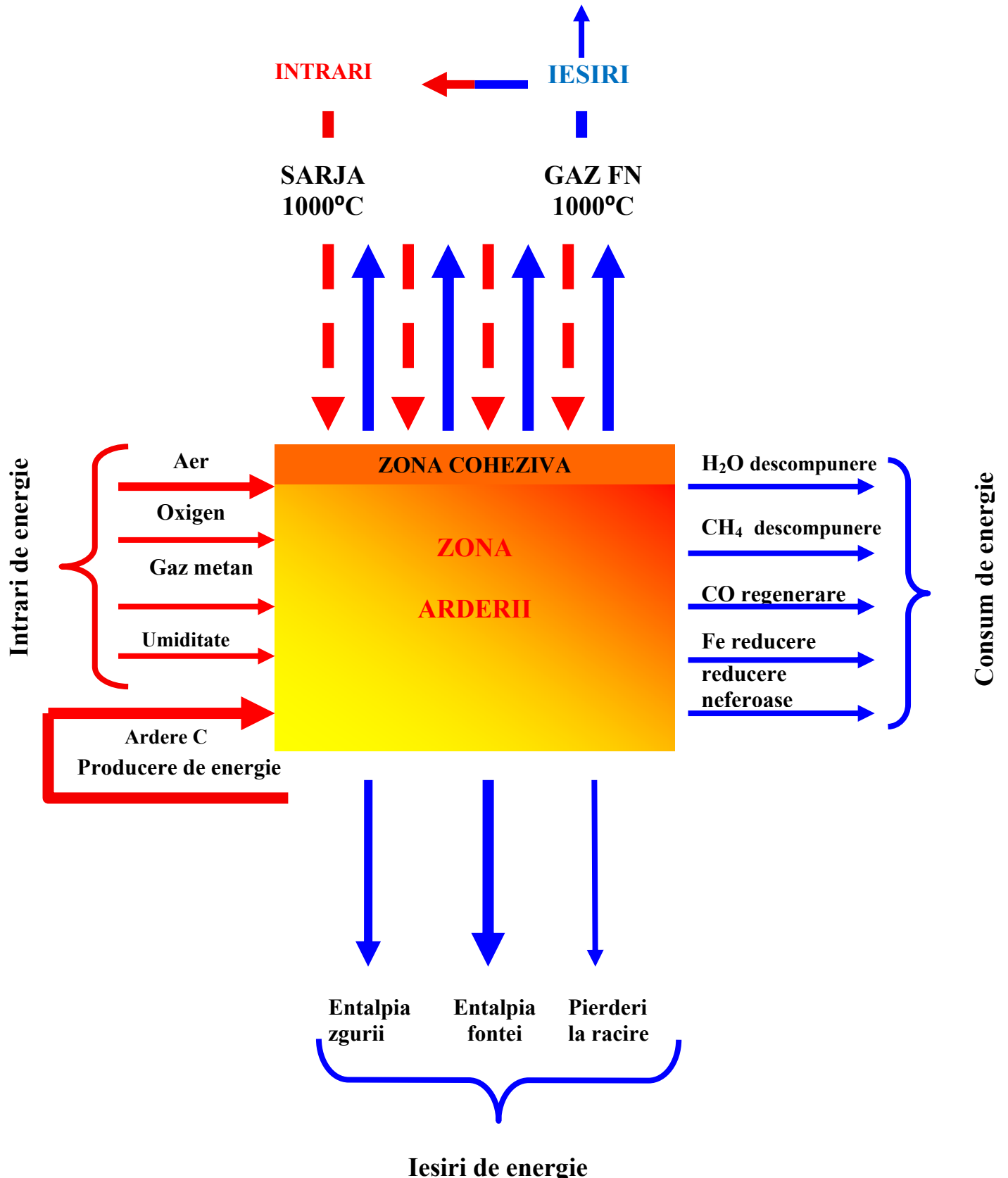
BILANTUL TERMIC

Siemens Model
FN- zona inferioara > 1000°C

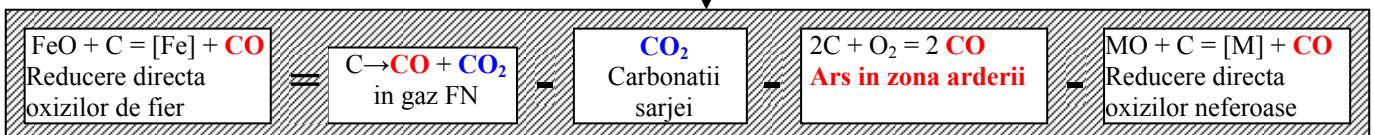
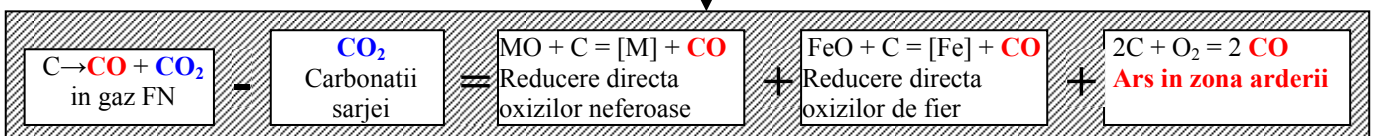
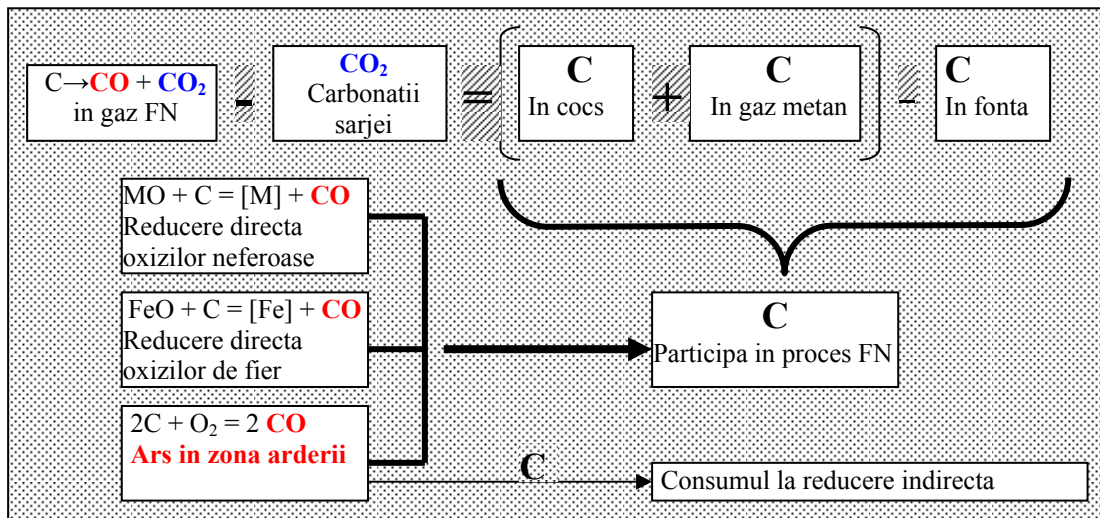
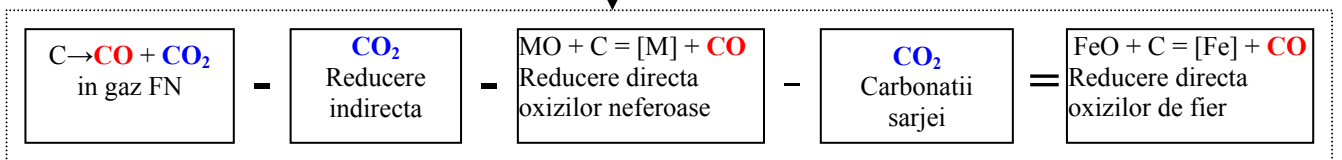
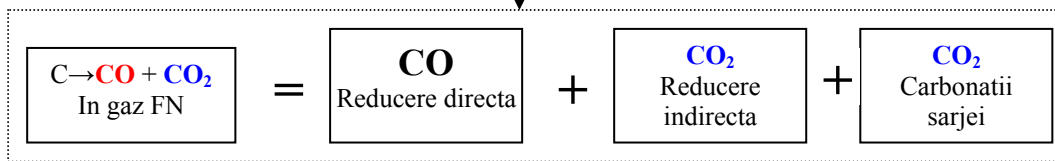
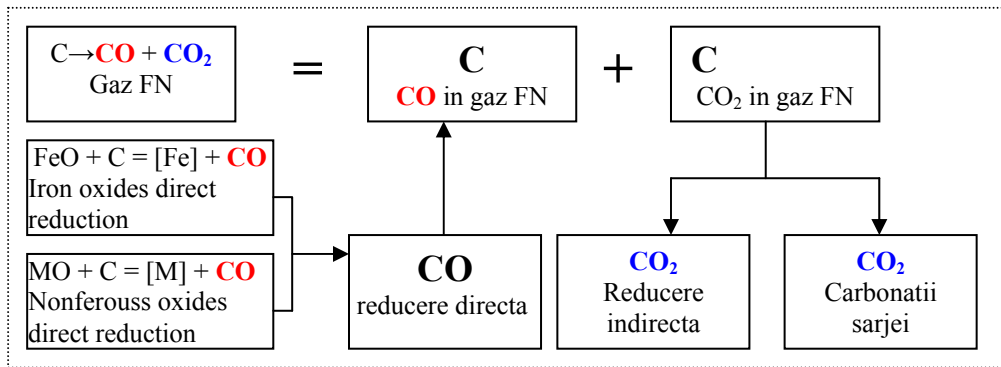


BILANTUL TERMIC










BF – 3
temperaturi > 1000 °C



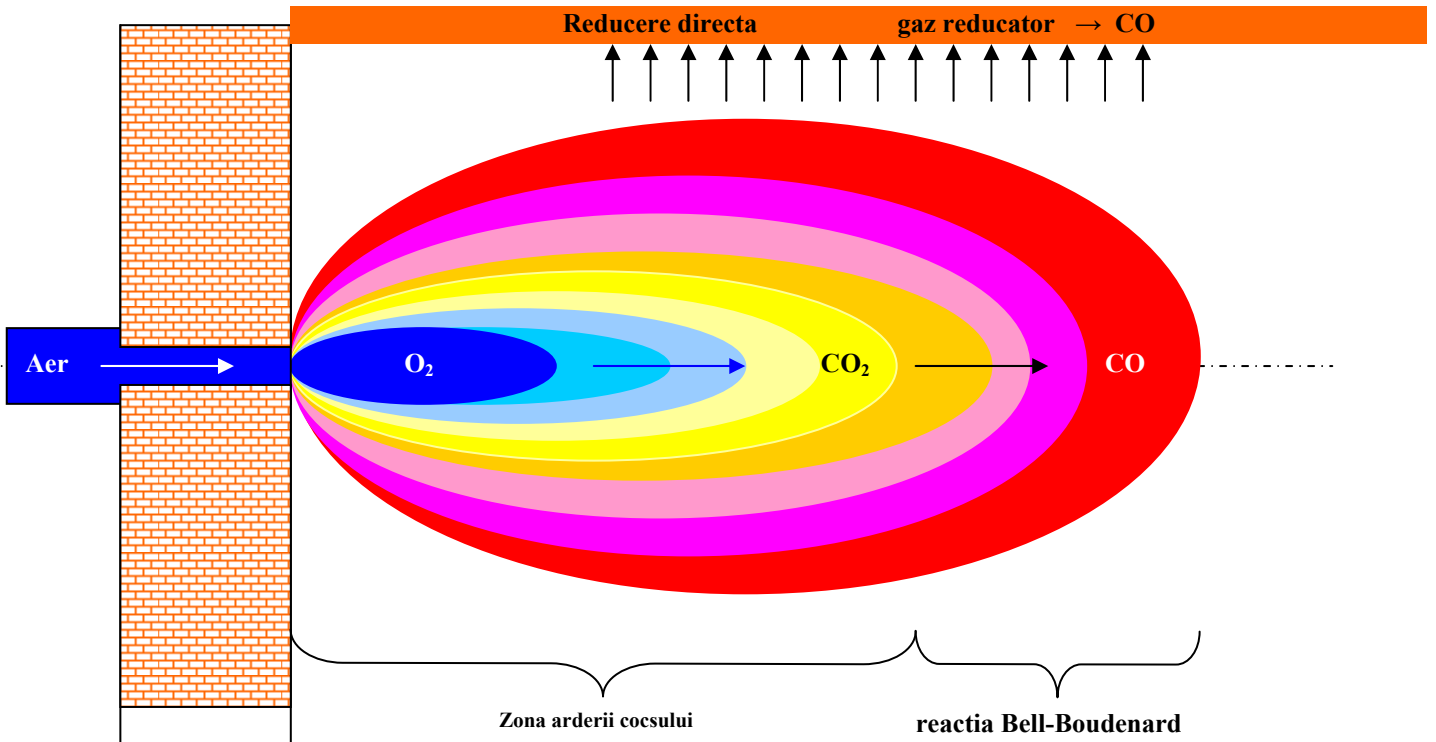
Distributia C in FN



Zona arderii

O_2		1150°C
$nO_2 + C = xCO_2 + (n-2x) O_2$		1300°C
$nO_2 + C = CO_2 + (n-2) O_2$		1500°C
$O_2 + C = CO_2 + \frac{1}{2} O_2$		1800°C
$O_2 + C = CO_2$		2000°C
$z CO_2 + yC = (z-y)CO_2 + yCO$		1900°C
$z CO_2 + yC = (z-y)CO_2 + yCO$		1800°C
$CO_2 + 2C = 2CO$		1700°C
CO		1550°C

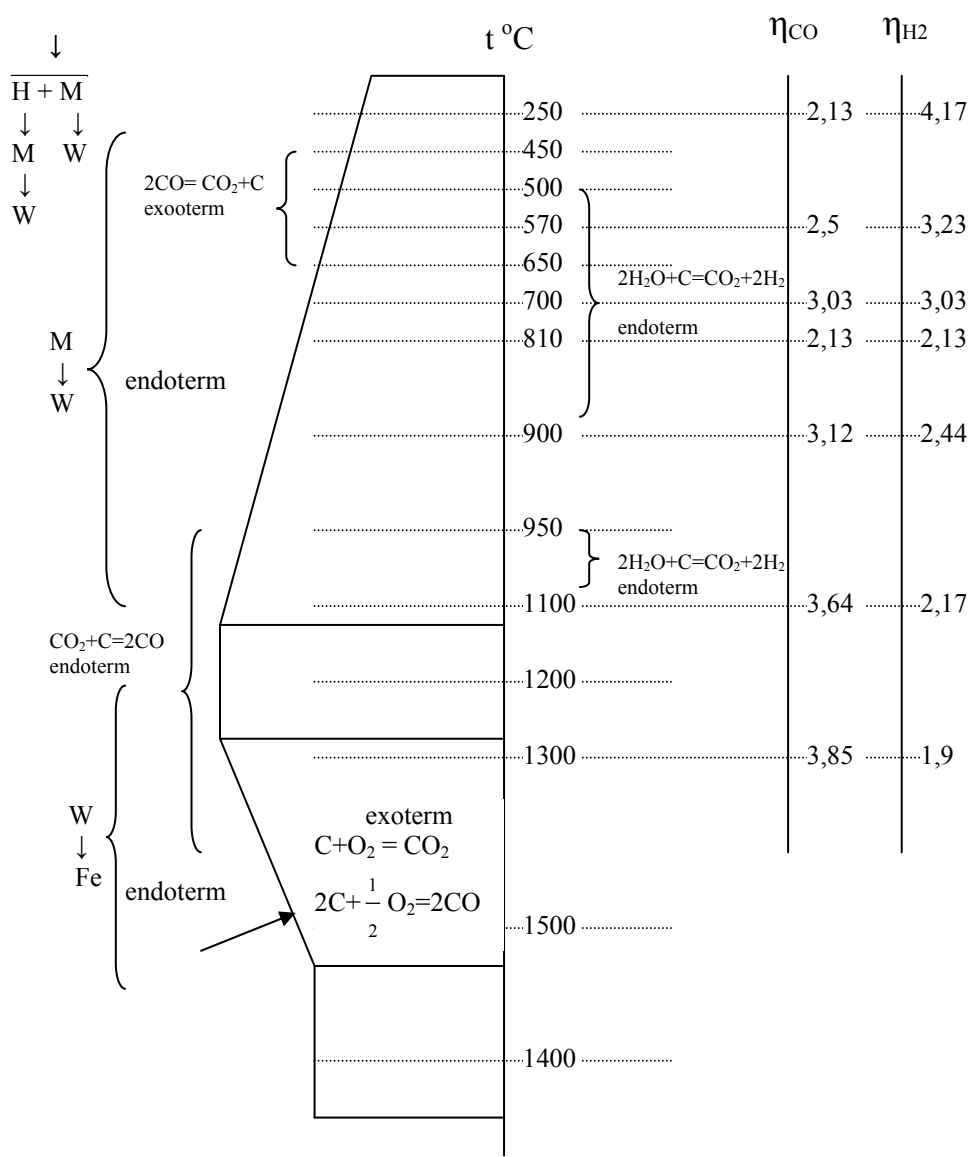
Reducere directa gaz reductor → CO



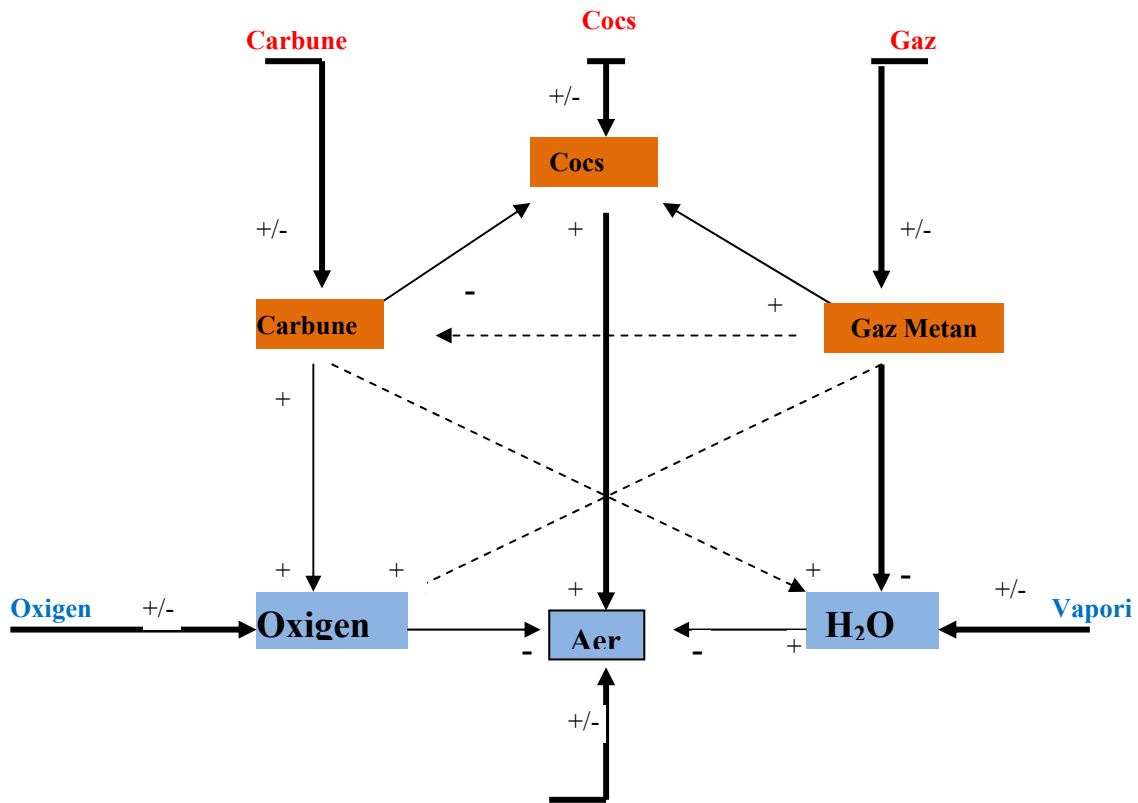
Zona arderii cocsului

reactia Bell-Boudenard

Distributia temperaturilor



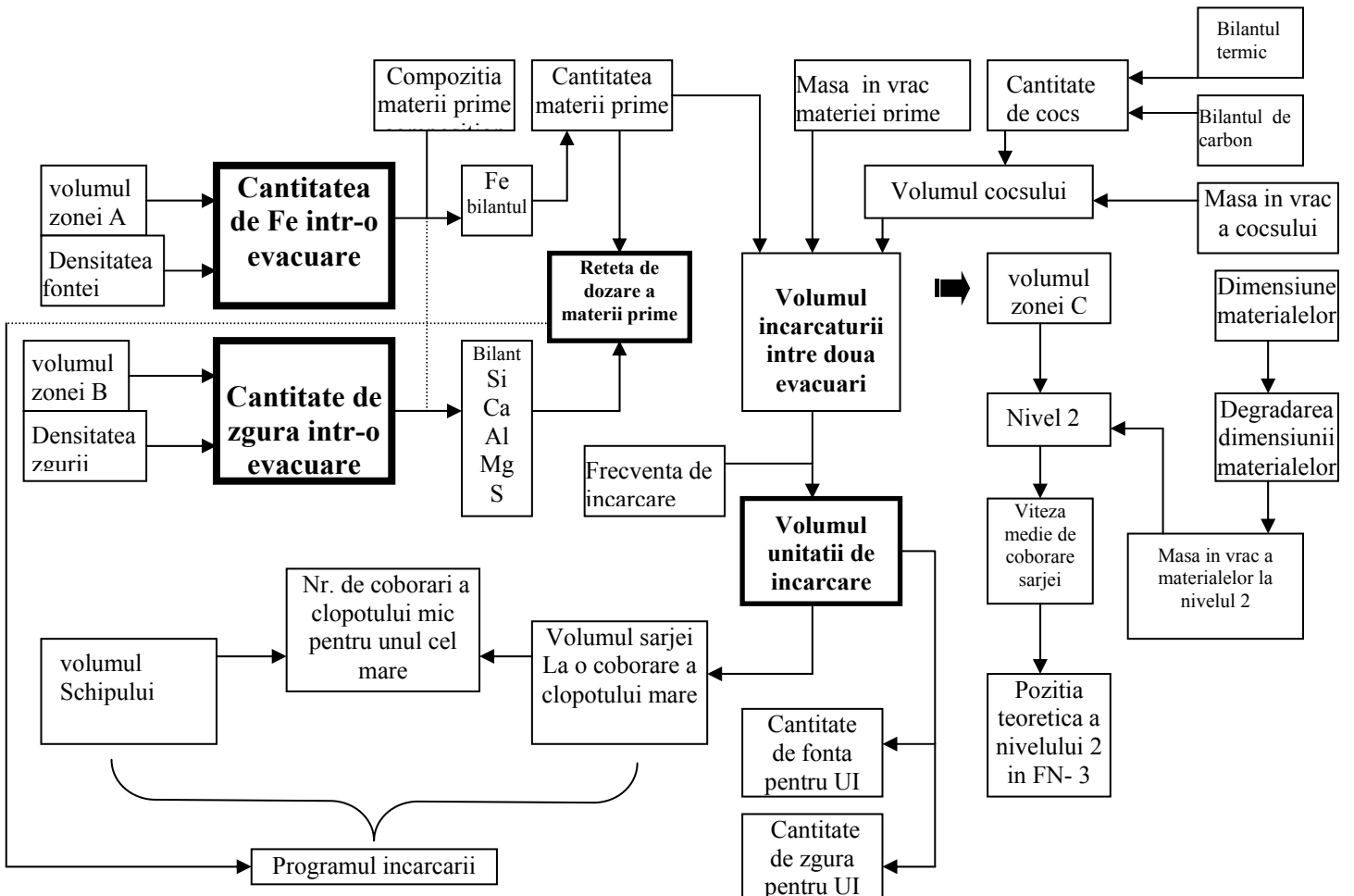
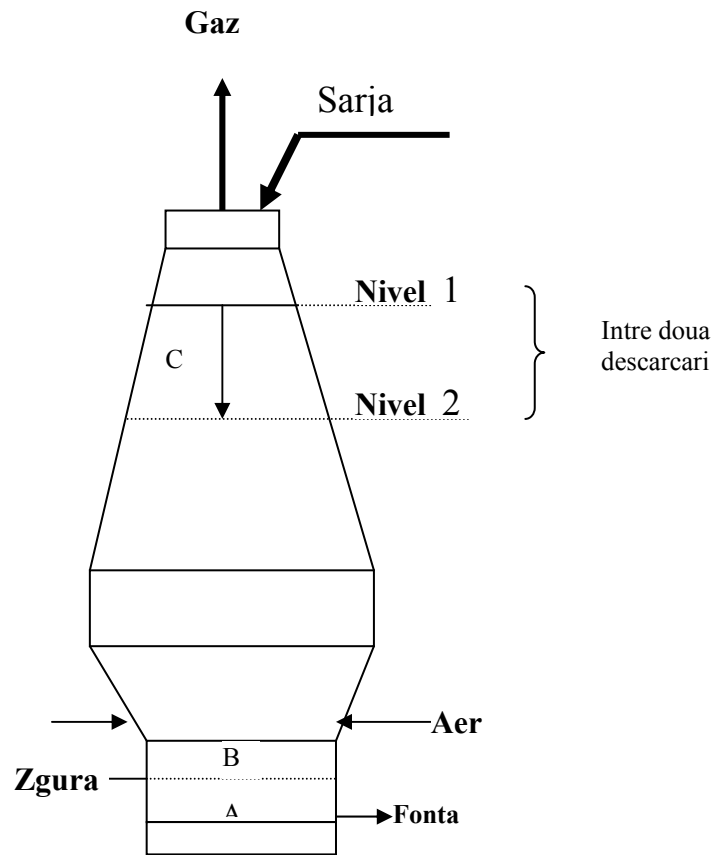
Indicii de exces CO si H₂ :
 $\eta_{CO} = (CO+CO_2)/CO_2=100/ CO_2$
 $\eta_{H_2} = 100/H_2O$



Legaturile de operare in panoul de comanda

- parameterii purtatori-O₂
- Parametrii purtatori - C

Bilantul Material FN - 3



Culegere date pentru procesare model MSPEFF

Anterior Urmator Sterge sarja Salvare Panou comanda Nomenclator analize materiale Nomenclator analize gaz Nomenclator preturi Exit

Data Nr.sarja = 13

30.10.2005 17:52:47

MIGRAL 2005



Incarcate

A1	A2	P1	P2	M1	M2	Mn	K	Km
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="644"/>	<input type="text"/>
Kg/t fo	Kg/t fo	Kg/t fo	Kg/t fo	Kg/t fo	Kg/t fo		Kg/t fo	Kg/t fo
A2/A1	P2/P1	M2/M1	Plt/Min	K/Km				
<input type="text" value="2"/>	<input type="text" value="5"/>	<input type="text" value="10"/>	<input type="text" value="1.857"/>	<input type="text"/>				

Sulfate

Carbune	Gaz	O2	O2_lanci	Abur	Aer	Tac
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="text" value="110"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="385"/>	<input type="text" value="1071"/>
Kg/t fo	Nm3/t fo	Nm3/t fo	Nm3/t fo	Kg/t fo	Nm3/t fo	
[Fe]	%L_SiO2	%O2_aer	Diametru furnal			
<input type="text" value="94.12"/>	<input type="text" value="12"/>	<input type="text" value="21"/>	<input type="text" value="9.1"/>	m		
[Mn]	%L_Mn	B_reg	Inaltime furnal			
<input type="text" value="0.8"/>	<input type="text" value="55"/>	<input type="text" value="50"/>	<input type="text" value="2"/>	m		
[C]	%L_S	Qfo/Ui	Densitate fonta			
<input type="text" value="4.3"/>	<input type="text" value="3"/>	<input type="text" value="25"/>	<input type="text" value="7.4"/>	t/m3		
B2	%L_P	Nr.ui/h	Densitate zgura			
<input type="text" value="1.15"/>	<input type="text" value="98"/>	<input type="text" value="6"/>	<input type="text" value="2"/>	t/m3		
B4	%Pd					
<input type="text" value="1.2"/>	<input type="text" value="1"/>					

Compozitie chimica pentru materiale incarcate

Material	%Fe	%FeO	%SiO2	%CaO	%Al2O3	%MgO	%Mn	%P	%S	%H2O	%Cs	%Vm	%C	%H	%O
Agl1	55.64	7.5	6.25	10.8	2.66	1.42	0.62	0.05	0.25						
Agl2	55.73	9.8	6.82	9.5	2.5	1.4	0.46	0.04	0.24						
Plt1	58.2	4.3	7.9	4.51	1.8	1.05	0.4	0.05	0.4	3					
Plt2	57.8	6.2	11.9	4.25	3.5	0.83	0.2	0.045	0.32	3.6					
Min1	61.8	3.2	5.34	3.51	1.57	0.78	0.52	0.15	0.39	5.3					
Min2	57.2	2.5	8.7	4.2	3.1	1.61	0.45	0.05	0.41	7.5					
Mangan	24.3	1.5	18.2	4.8	6.2	1.72	24.3	0.15	0.23	4.2					
Cocs	20.7	5	45	4.5	23.32	1	0.3	0.18	0.65	5.48	12.8	0.63	81.78	0.2	
Cocs_m	20.7	5	45	4.5	23.32	1	0.3	0.18	0.79	5.48	12.8	0.63	81.78	0.2	
Carbune	25.8	3	42	2.4	24.29	1.5	0.6	0.41	0.4	8	12	33	66	4	

Compozitia chimica pentru gaz

%CH4	%C2H6	%C3H8	%C4H10	%C5H12	%N	%CO2	%H	%O
76.7	4.5	1.7	0.8	0.6	14.5	0.2	1	2



Sarja nr: 13 din 30.10.2005

Cost part. \$/h

Panou de comanda

Q_Abur	QO2	Q_Aer	Q_Cocs	Q_Carbune	Q_Gaz
<input type="text" value="18.33"/> Kg/t	<input type="text" value="50."/> Nm3/t	<input type="text" value="1361"/> Nm3/t	<input type="text" value="525"/> Kg/t	<input type="text" value="110"/> Kg/t	<input type="text" value="0"/> Nm3/t
<input type="text" value="2.71"/> t/h	<input type="text" value="7386"/> Nm3/h	<input type="text" value="201"/> Nm3/h	<input type="text" value="77590"/> Kg/h	<input type="text" value="16249"/> Kg/h	<input type="text" value="0"/> Nm3/h

Tac (oC)

Productivitate

t/h

t/sch

t/zi

Tgat (oC)

CO2
CO2+CO

Gaz FN3	
%CO	<input type="text" value="23.85"/>
%CO2	<input type="text" value="21.01"/>
%H2	<input type="text" value="2.93"/>
%(H2O)g	<input type="text" value="6.45"/>

Tfo (oC)

Tfl (oC)

MJ MJ Kcal/t

Cocs

Carbune

Gaz CH4

Aer plus

Oxigen

Abur

FONTA

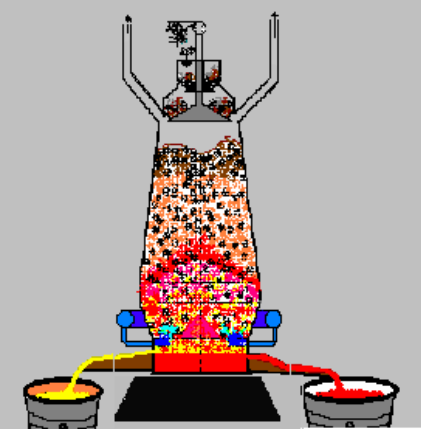
[Si]	[Mn]	[P]	[S]
<input type="text" value="0.81"/>	<input type="text" value="0.84"/>	<input type="text" value="0.12"/>	<input type="text" value="0.03"/>

ZGURA Kg/t

(SiO2)	(CaO)	(Al2O3)	(MgO)	(MnO)
<input type="text" value="35.63"/>	<input type="text" value="40.30"/>	<input type="text" value="16.44"/>	<input type="text" value="6.15"/>	<input type="text" value="1.48"/>

Breg	Lsi	Lmn	B2	B4
<input type="text" value="50."/>	<input type="text" value="12."/>	<input type="text" value="55."/>	<input type="text" value="1.13"/>	<input type="text" value="0.89"/>

A2/A1	P2/P1	M2/M1	Ui	Nr.ui
<input type="text" value="2."/>	<input type="text" value="5."/>	<input type="text" value="10."/>	<input type="text" value="25."/>	<input type="text" value="6."/>



Cocs Kg/ui

Cocs_m Kg/ui

Agl1 Kg/ui

Agl2 Kg/ui

Plt1 Kg/ui

Plt2 Kg/ui

Min1 Kg/ui

Min2 Kg/ui

Min Mn Kg/ui

tone

Limite

Rd = 25 ... 60 %

RCO2 = 40 ... 60 %

Tfo = 1300 ... 1500 oC

Tgit = 50 ... 250 oC

Tfl = 1800 ... 2400 oC

Prod = 100 ... 170 t/h

Lsi = 10 ... 15 %

Lmn = 50 ... 70 %

