Section I-I
M.: 1:10
Nozzle "AT/BT"
Typ XIV

In circumference:
38 pcs - 150x198x103/87,5
34 pcs - 150x198x103/92,5

In circumference:
103 pcs - 150x230x71/63

CERAMIC SLEEVE
Sealing ORL supply
CURB/FRAME
Mat.: CALDECAST T 97

Section A-A
M.: 1:15

FILL WITH
Mat.: CALDECAST XL 128 CO
CFB 1400-130 / ½" thick
ceramic fiber blanket

NOZZLE "TE/N" Typ I
NOZZLE "C" Typ XVIII
Metallic anchor AG50 - 310 8 pc per circumference
Metallic anchor Y/240 - 310

300mm CHOKE RING (40% Open Area)

Ceramic blanket at the burner connection by DUIKER
GASKET MOUNTING FLANGE - KLINGER MM 108 - Ø1515 x Ø1445 x 3

view 1
only for welding positions
M.: 1:15

NOZZLE "C" Typ XVIII
Metallic anchor Y/240 - 310
Metallic anchor AG50 - 310

Detail "c"
M.: 1:10
Nozzle "TE/N"
Typ I

CFP 1400 / 3mm thick
ceramic fiber paper
CERAMIC SLEEVE

Section D-D
M.: 1:15

NOZZLE "TE/N" Typ I
CURB/FRAME
Mat.: CALDECAST T 97
NOZZLE "SP2/SP3"
In circumference:
103 pcs - 150x230x71/63
In circumference:
38 pcs - 150x198x103/87,5
34 pcs - 150x198x103/92,5

Detail "d"
M.: 1:10
Nozzle "SP2"

Section B-B
M.: 1:15

NOZZLE "SP1"
NOZZLE "SP2"
NOZZLE "AT" Typ XIV
NOZZLE "BT" Typ XIV
NOZZLE "SP3"
CFP 1400 / 3mm thick ceramic fiber paper
FILL WITH
Mat.: CALDECAST XL 128 CO

Connection
Main burner 137-S-301
CFB 1400-130 / ½" thick ceramic fiber blanket
CFP 1400 / 3mm thick ceramic fiber paper
Connection
Waste heat boiler 137-B-301
ORL-No. 137-B-301-14-1011

view 2
800
Ø460
Metallic anchor Y/240 - 310
Metallic anchor AG50 - 310
NOZZLE "MW"
Manhole must be filled with ceramic fibre blanket after installation!
CFB 1400-130 / 1" thick

Section H-H
M.: 1:15

In circumference:
57 pcs - 50x230x65/60
In circumference:
47 pcs - 115x230x73/57

Typical of corrosion resistant layer
M.: 2:1

The complete inside steel surface must be carefully cleaned and polished!
Steel shell
CFP 1400 / 1mm thick ceramic fiber paper
ACID resistant cement HES 1mm thick

Section C-C
M.: 1:15

In circumference:
103 pcs - 150x230x71/63
In circumference:
38 pcs - 150x198x103/87,5
34 pcs - 150x198x103/92,5
In circumference:
7 pcs - 150x198x103/72
47 pcs - 150x198x103/87,5
NOZZLE "SP1"
In circumference:
16 pcs - 150x198x103/72
29 pcs - 150x198x103/87,5
In circumference:
25 pcs - 150x198x103/72
11 pcs - 150x198x103/87,5

Detail "b"
M.: 1:10

Fill the hexagon tubes with
Mat.: CALDECAST XL 128 CO
CFB 1400-130 / ½" thick
ceramic fiber blanket
CORROSION RESISTANT LAYER

view 2
only for welding positions
M.: 1:15

Metallic anchor AG50 - 310
Metallic anchor Y/240 - 310
Metallic anchor AG50 - 310
16 pc per circumference
NOZZLE "MW"

Detail "f"
M.: 1:10

CFB 1400-130 / ½" thick
ceramic fiber blanket

Section F-F
M.: 1:15

NOZZLE "C" Typ XVIII
Metallic anchor Y/240 - 310
CURB/FRAME
Mat.: CALDECAST T 97
In circumference:
38 pcs - 150x198x103/87,5
34 pcs - 150x198x103/92,5
In circumference:
103 pcs - 150x230x71/63
Metallic anchor Y/240 - 310
Metallic anchor AG50 - 310
NOZZLE "MW"
CFB 1400-130 / 1" thick

Section E-E
M.: 1:15

Fill the hexagon tubes with
Mat.: CALDECAST T 97
Checker wall assembly consist of:
34 pcs - full hexagon tubes
13 pcs - half hexagon tubes
(40% open area)
In circumference:
103 pcs - 150x230x71/63
MAN HOLE

Section G-G
M.: 1:15

In circumference:
103 pcs - 150x230x71/63
In circumference:
38 pcs - 150x198x103/87,5
34 pcs - 150x198x103/92,5
In circumference:
7 pcs - 150x198x103/72
47 pcs - 150x198x103/87,5
In circumference:
16 pcs - 150x198x103/72
29 pcs - 150x198x103/87,5
In circumference:
25 pcs - 150x198x103/72
11 pcs - 150x198x103/87,5

Detail "a"
M.: 1:10

FILL WITH
Mat.: CALDECAST XL 128 CO
CURB/FRAME
Mat.: CALDECAST T 97
CFB 1400-130 / ½" thick
ceramic fiber blanket
CORROSION RESISTANT LAYER
CFP 1400 / 3mm thick
ceramic fiber paper
NOZZLE "SP1"
Bricks cut at site

Detail "e"
M.: 1:10
Nozzle "BT+SP3"

NOZZLE "BT" Typ XIV
NOZZLE "SP3"
CERAMIC SLEEVE
Sealing ORL supply
CURB/FRAME
Mat.: CALDECAST T 97

QUALITIES:

RB 95 AT HIGH ALUMINIA BRICK		CFB 1400-130 CERAMIC FIBER BLANKET	
IFB 30 INSULATING FIRE BRICK		CFP 1400 CERAMIC FIBER PAPER	
CALDECAST XL 128 CO LIGHT WEIGHT CONCRETE		ACID resistant cement HES	
CALDECAST T 97 REFRACTORY CONCRETE			

NOTE:
General lining instructions see 0090180003-0.doc
Bill of material please refer: BOM - 137-F-303-14-1012

Index: / Index	Vermerk für Änderungen: / Notes for changes:	Name: / Name	Datum: / Date
B	Drawing Update, ORL - Rev. 0 - Approved for construction	TK	30.12.2009
A	HES, Manway opening and anchors added	TK	01.12.2009

OIL REFINERY LTD.
P.O. Box 4
Haifa 31000, Israel

Minerals & Refractories ltd.
P.O.B. 106, Yehud 56100 Israel
Yehud 56100 Israel

Ingenieur- und Konstruktionsbüro für Feuerungsbau
ikb GmbH
Klingelswiese 2 - D-56626 Andernach - Postfach 1417 - D-56604 Andernach

Kunde: / Customer: OIL REFINERIES LTD

Aggregat: / Unit: Refractory Lining - Thermal Reactor 137-F-303

Zugehörige Zeichnung: / To this drawing belongs: 137-F-303-14-1001 / -1010 BOM - 137-F-303-14-1012

Ersatz für: / Replacement for:

Kundenzeichnungs-Nr.: / Customer drawing-no.:

Ersetzt durch: / Replaced by:

Maßstab: / Scale: 1:15

Datum: / Date: 29.10.2009
Gez.: / Drawn: TK
Gep. / check: PA

Projekt: / Project: 009018

Zeichnungs-Nr.: / Drawing-No.: 137-F-303-14-1011 Rev. 0

009018R0014D.DWG

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