

Cetetherm

MUSTAMÄGI

District Heating Rehabilitation Project, Estonia 1997

WB -Project No. LS /1/ 18

Ref: 43097

Linnasoojus ME

Kesküttesölm No 17 / 2

Raja 19

Valmistaja : Cetetherm Oy, Finland,

Tel: +358 9-2755 622

Esindaja Eestis: AS Efipa

Tel: 6410692

CONSUMER SUBSTATION TECHNICAL DATA

N:o 17 Proj: 43097
Address Raja 19

HEAT EXCHANGERS HEATING LS2 DOMESTIC HOT WATER LS1

Manufacturer		CETETHERM		CETETHERM
Type		CP 410 - 50		CP 415 - 50
Heat output	kW	59		140
		Primary	Secondary	Primary Secondary
Temperatures	°C	125 - 70	65 - 90	65 - 25 5 - 55
Flow	dm³/s	0,26	0,56	0,84 0,67
Pressure loss	kPa	5	20	5 30
Design pressure	MPa	1.6		1.6
Material		AISI 316		AISI 316

MOTOR VALVES HEATING MV DOMESTIC HOT WATER MV

		<u>MV2.1</u>	<u>MV2.2</u>	<u>MV1.1</u>	<u>MV1.2</u>
Manufacturer		TOUR&ANDERSSON		TOUR&ANDERSSON	
Type		V294		V294	
Flow	dm³/s	0,26		0,84	
Pressure loss	kPa	33		57	
Size	DN/kvs	15 / 1,6	/	20 / 4	/

CIRCULATION PUMPS HEATING P2 DOMESTIC HOT WATER P1

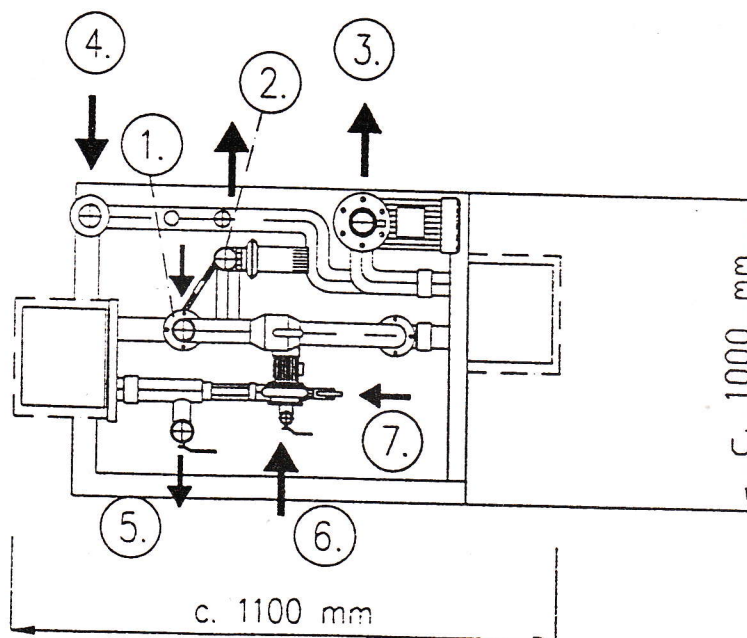
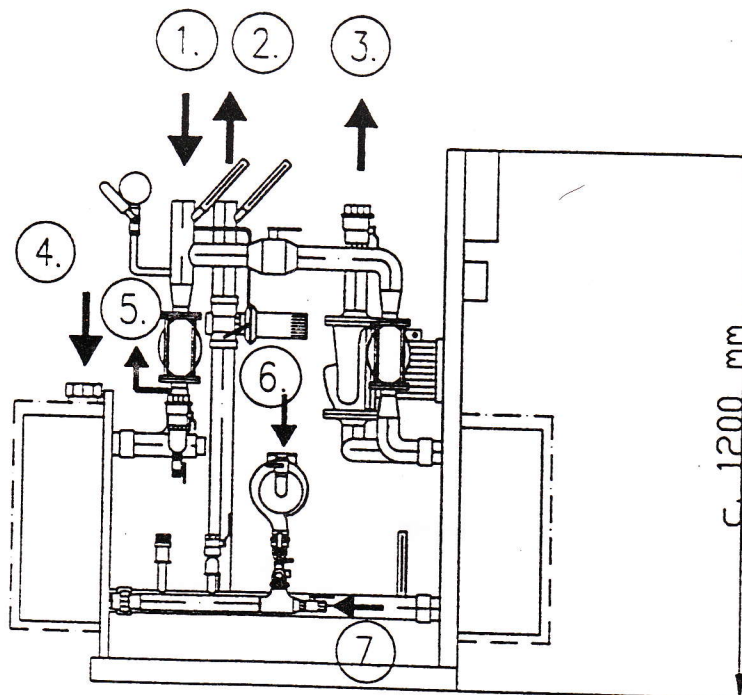
Manufacturer		KOLMEKS		KOLMEKS
Type		AE-20/4		AP-20/4
Flow	dm³/s	0,56		0,20
Pump head	kPa	37		20
Motor rating	kW	0,08		0,05

EXPANSION SYSTEM

Heating system water volume	m³	0,9
Expansion tank volume and pre-pressure	dm³/kPa	50 / 80
Safety valve size and opening pressure	DN/bar	25 / 6,0
Pressure differential valve	Manufacturer	Type
	IWKA	V73D53/DN20
Pressure differential available in DH pipes	kPa	60

Cetetherm

SUBSTATION MODEL MAX. CAPACITY : HEATING 200 kW
: HOT WATER 195 kW

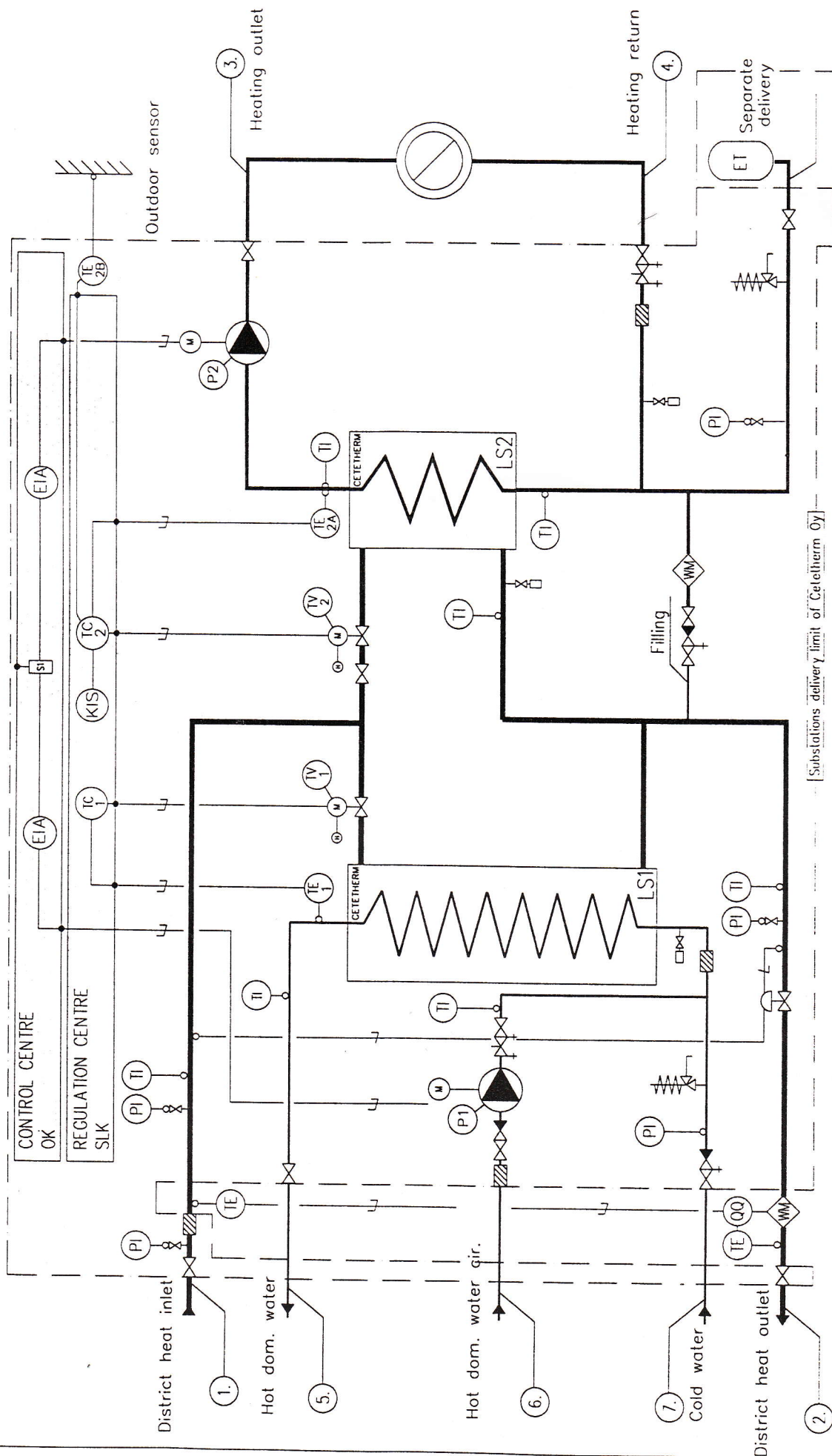


PRELIMINARY DIMENSIO DRAWING

System n:o 17	Order acknowledgement 43097	Capacity Dom/He: 140/59	Prim.	Secun.
			Tempera. (°C)	-
			Pressure (kPa)	-
Coupling				
1. District heating, supply	☒ DN32	☐ DN40	☐ DN50	☐ DN65
2. District heating, return	☒ DN32	☐ DN40	☐ DN50	☐ DN65
3. Heating, outlet	☒ DN25	☐ DN50	☐ DN65	☐ DN80
4. Heating, return	☒ DN25	☐ DN65	☐ DN80	☐ DN100
5. Hot dom. water	☒ DN30	☐ DN40	☐ DN50	
6. Hot dom. water circul.	☒ DN20	☐ DN25	☐ DN32	
7. Cold water	☒ DN30	☐ DN40	☐ DN50	
File name:				mkml.dwg
Location:				c:\acimk\vienti
Date:				24.2.97
Name:				Miettinen
Cetetherm				

TALLINNA SOOJUS LTD, IFB NO LS/1/18

PRINCIPAL CIRCUIT DIAGRAM: DOMESTIC HOT WATER CAPACITY UNDER 200 kW



Cetetherm

FILE NAME : kkifb53.dwg

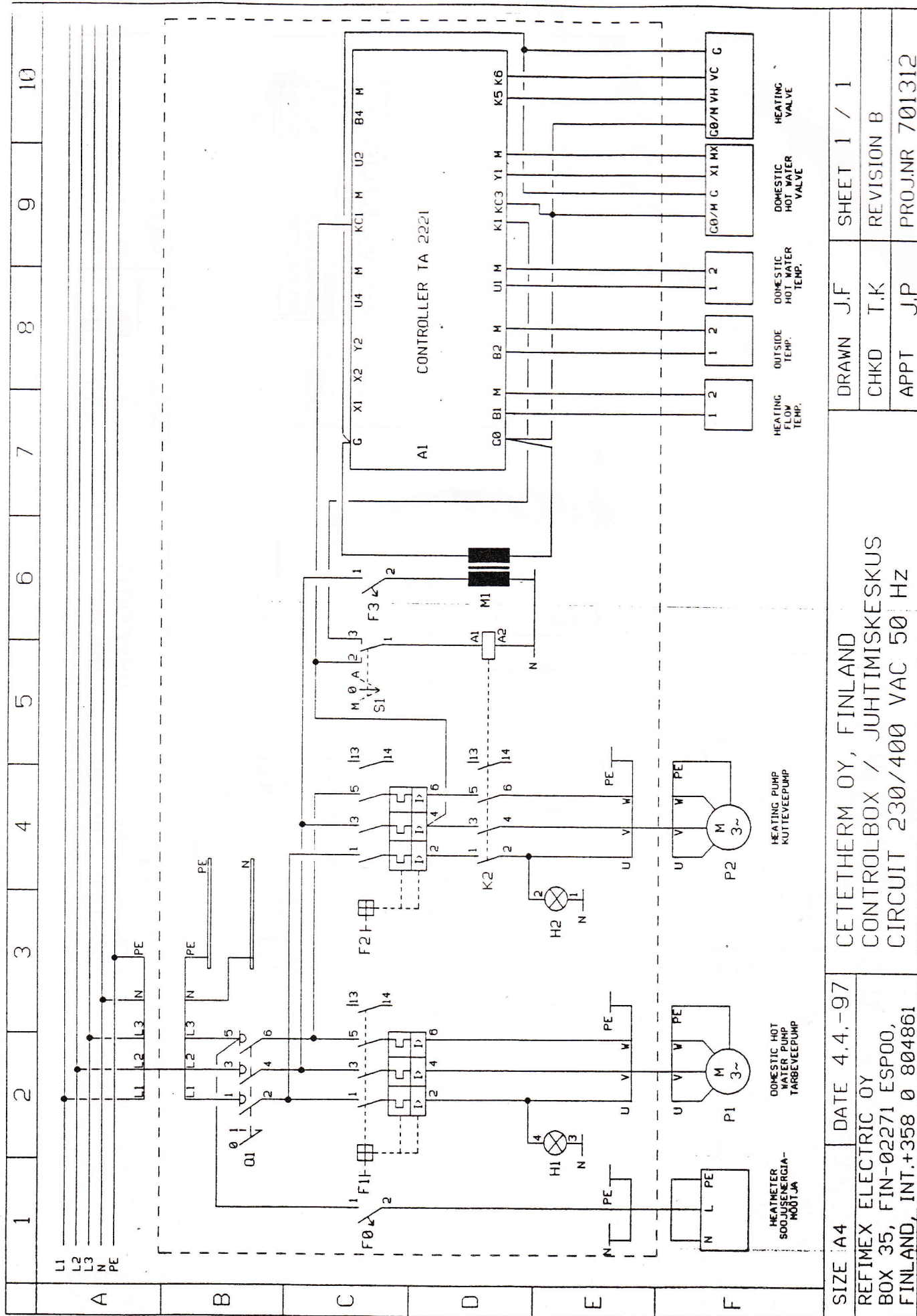
DATE : 21.4.1997

APPROVED :

DIRECTORY : c:\vientil

DRAWN BY : KOSUNEN

RECORD NUM. :



CETETHERM OY, FINLAND
CONTROLBOX / JUHTIMISKESKUS
CIRCUIT 230/400 VAC 50 HZ

SIZE A4 DATE 4.4.-97

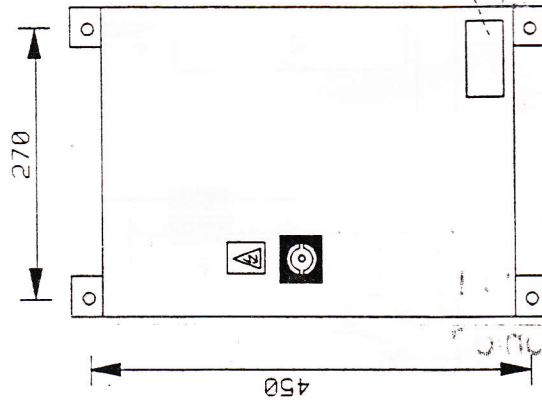
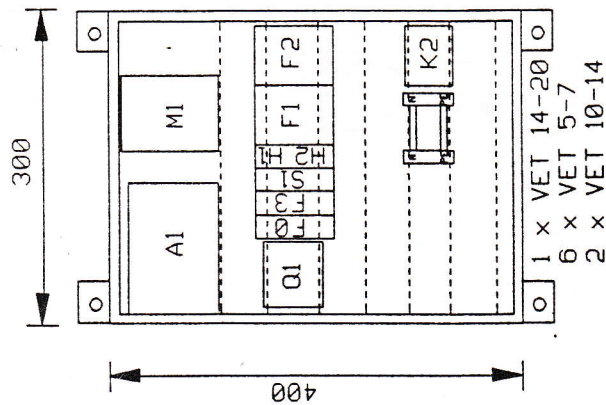
REFIMEX ELECTRIC OY
BOX 35, FIN-02271 ESPOO,
FINLAND, INT.+358 0 804861

DRAWN J.F. SHEET 1 / 1

CHKD T.K. REVISION B

APPT J.P. PROJ.NR 701312

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REFIMEX ELECTRIC OY

ESPOO FINLAND

MODEL IP

SERIAL 701312 AMPS 25 A

VOLTS 400 / 50 Hz

Unit No. 17Acknowledge No. 43097Product CKL-415-5D/410-5D☐ Tests without water☒ Tests with water☒ Pumps☒ Reg Valves Kvs☒ Heat Exch Manuf No.☒ Hydraulic Test☒ Electronic TestAP-20/44.010566629KNM.PAE-20/41.6~~10566629~~KNM.P10569684

Pressure Tests

☒ District Heating

2,4 Mpa

test start

2.4

test duration

2.4☒ Domestic HotWater

1,5 Mpa

1.51.5☒ Heating

1,5 Mpa

1.51.5

Remarks

☒ Visual inspection☐ Radiographical inspection☐ Repaired☐ Date of supervision☐ Supervisor19.5.1997*[Signature]*