Iceland Liechtenstein Norway grants

Norway grants

Geothermal district heating in Poland

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MEERI PAS

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Geothermal areas in Poland

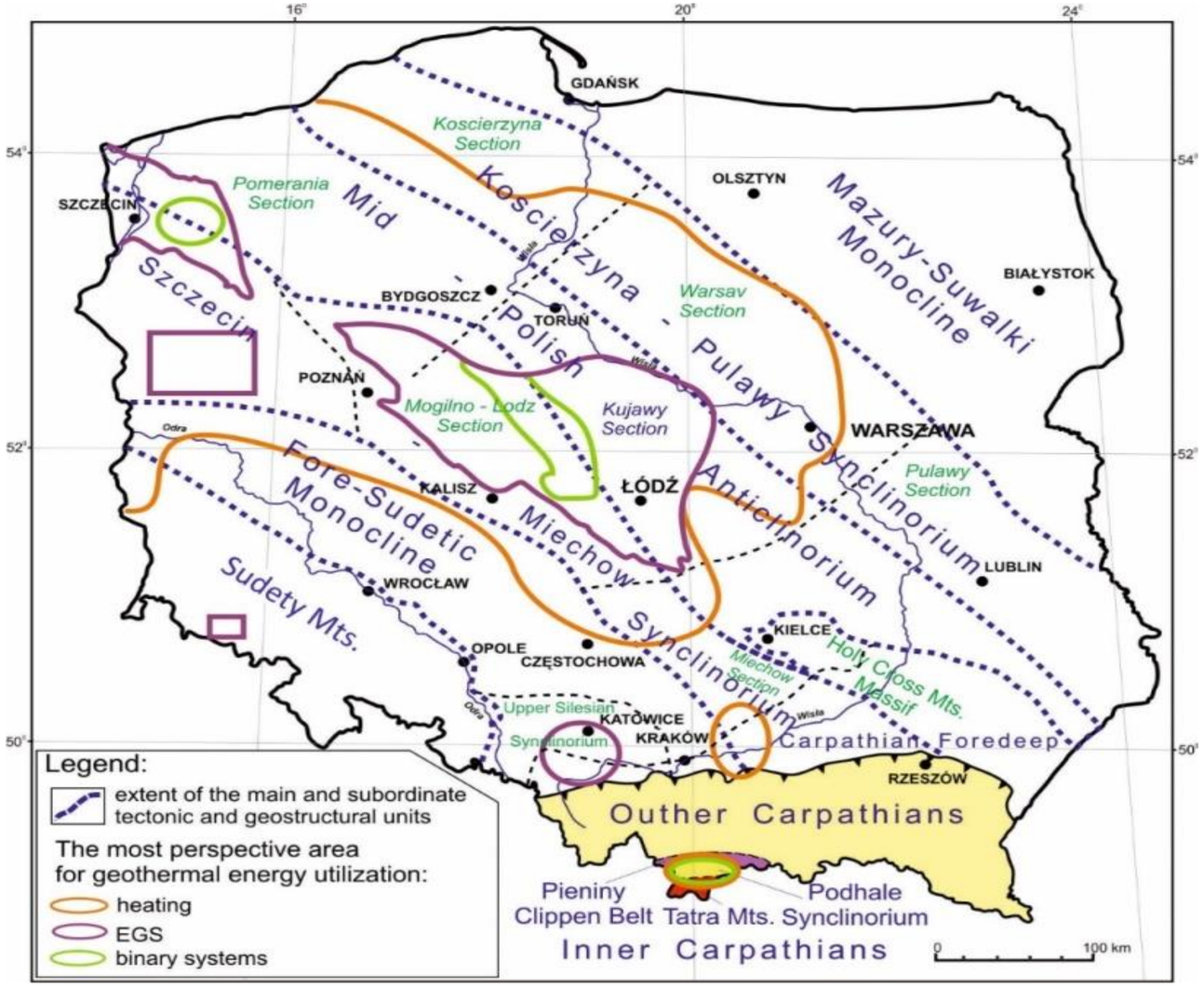


Fig. 1. According to A. Sowiżdżał , AGH

Utilisation of geothermal energy or water

Fig. 2. Geotermal instalation in Poland in 2017y.:

1- district heating, 2- health resort, 3- leisure center,

4- timber drying, 5- fishery, 6- leisure center(upcoming)

7-beginnig of heating project, 8- research boreholes

9- expected cogeneration instalation

Fig. 2. Źródło: Kępińska B., 2020 – Przegląd stanu wykorzystania energii geotermalnej w Polsce w latach 2016-2018. Technika Poszukiwań Geologicznych, Geotermia, Zrównoważony Rozwój, Vol. 57(1), str. 11-27

Mszczonów

Temp. at the outflow (°C)	42
Max flow rate (m3/h)	60
Mineralisation (g/dm3)	0,5
Installed geothermal power heat (MWt)	3,7
Production of geothermal heat (TJ)	17
Number of wells	1 (+1)
Parameters of DH (°C)	80/60 70/50

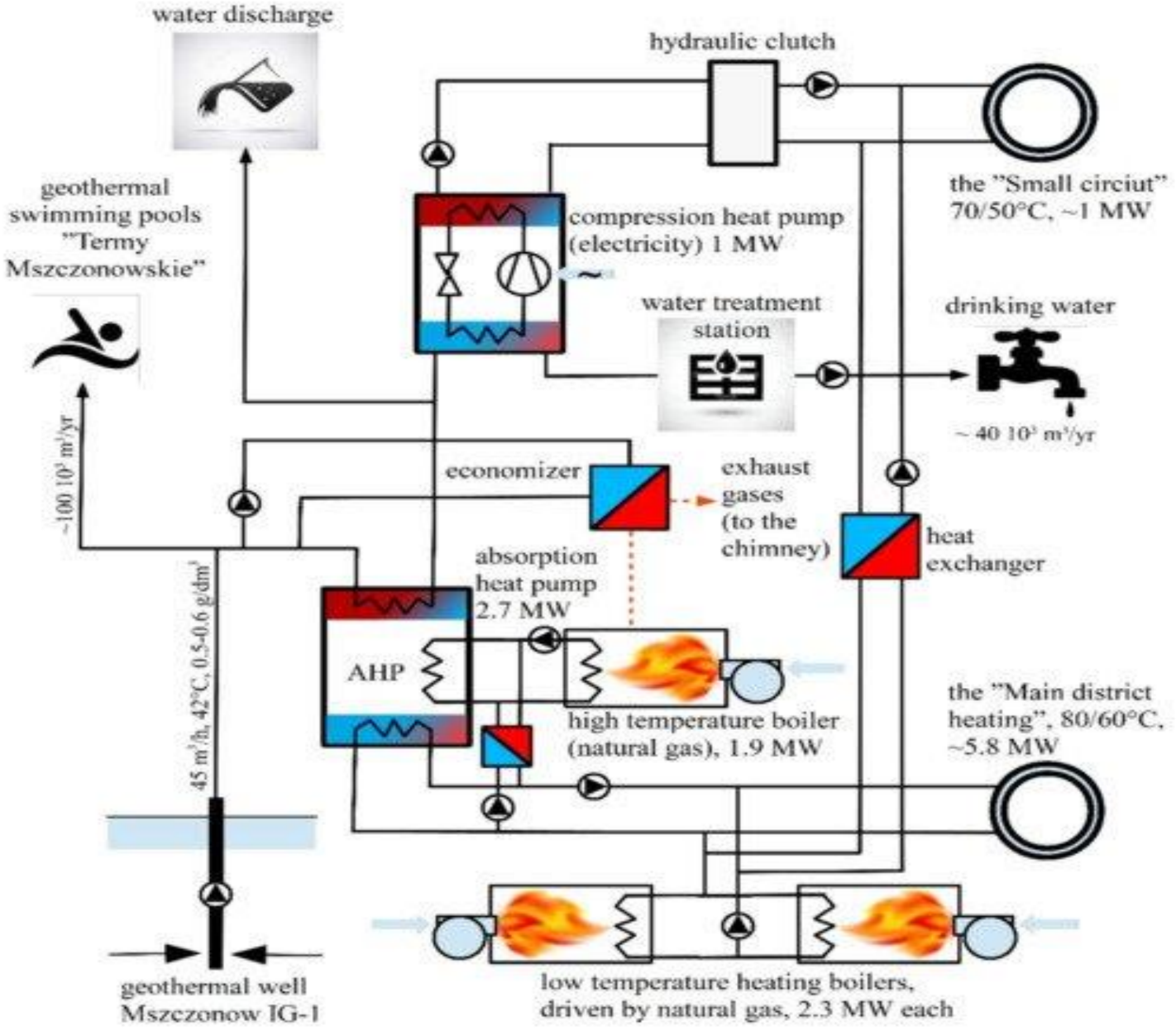


Fig. 3. Geothermal instalation in Mszczonów town (Pająk i in. 2020)

Poddębice

Temp. at the outflow (°C)	68
Max flow rate (m3/h)	252
Mineralisation (g/dm3)	0,4
Installed geothermal power heat (MWt)	10
Production of geothermal heat (TJ)	68
Number of wells	1
Parameters of DH (°C)	90/70 65/45

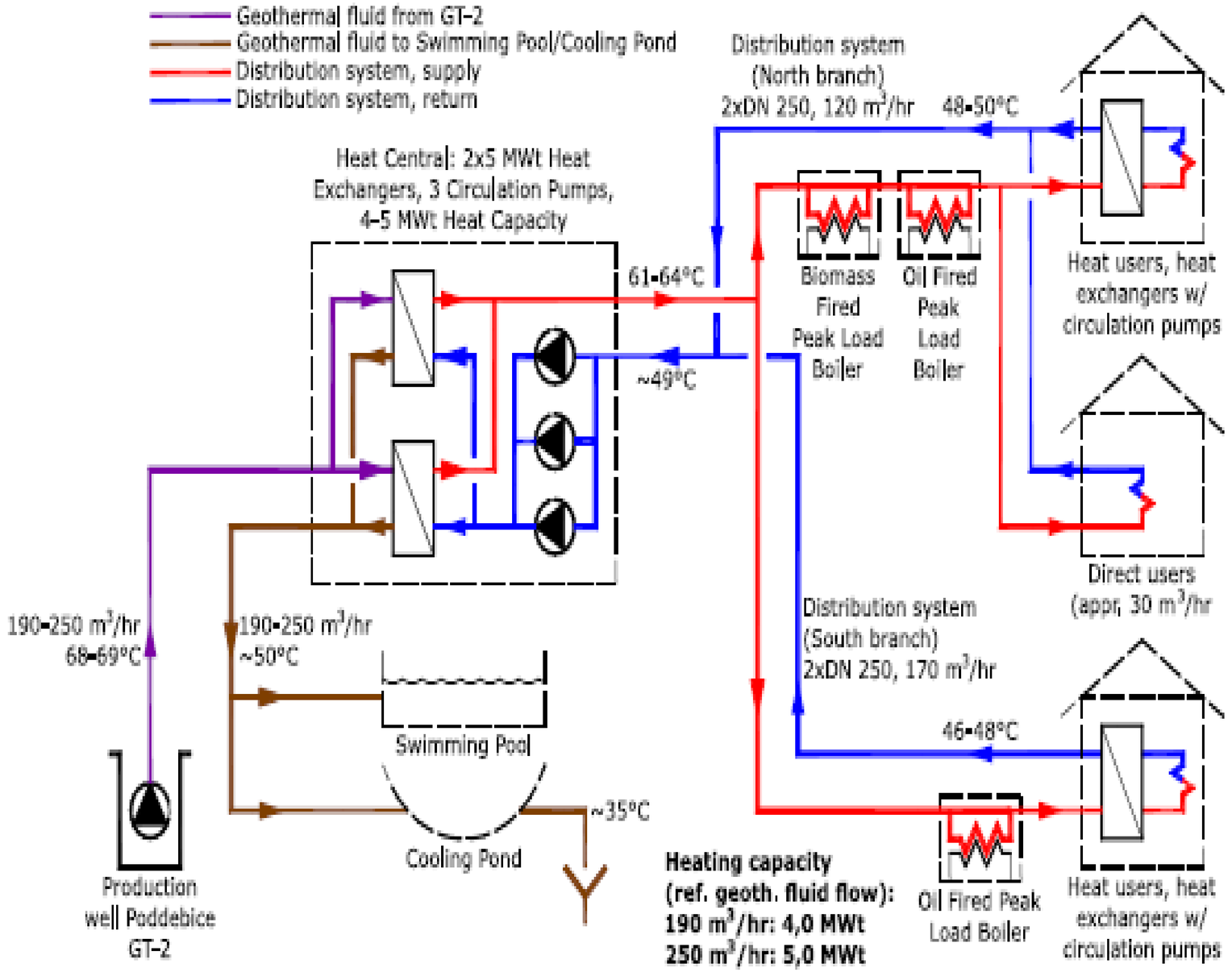


Fig. 4. Current and planned usage of geothermal Energy in Poddębice town(Kępińska i in. 2017a)

Podhale

Temp. at the outflow (°C)	82-86
Max flow rate (m3/h)	1070
Mineralisation (g/dm3)	2,5
Installed geothermal power heat (MWt)	40,7
Production of geothermal heat (TJ)	512
Number of wells	3 +3
Parameters of DH (°C)	85/55

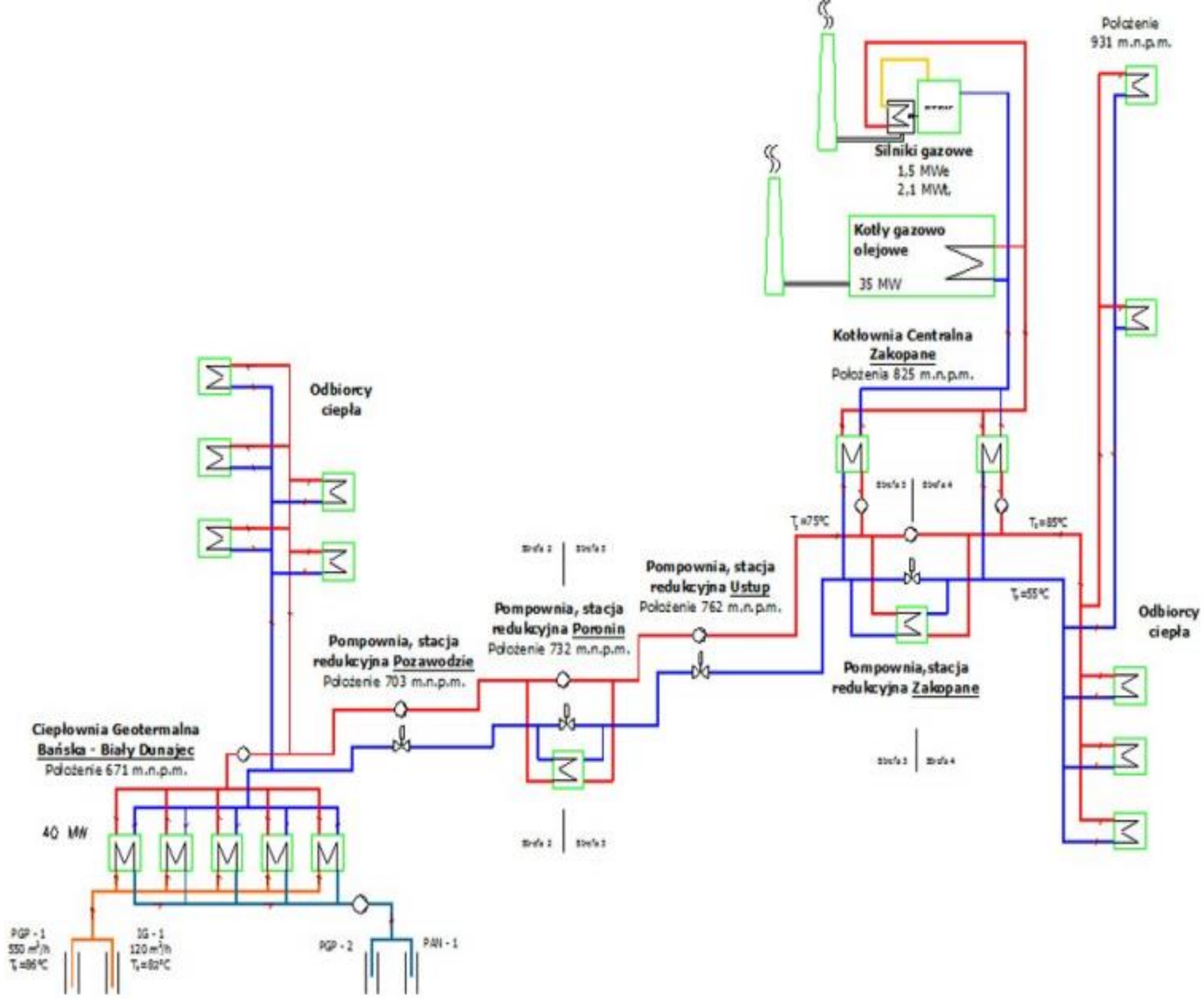


Fig. 5. Technological scheme of geothermal system in Podhale town

Pyrzyce

Temp. at the outflow (°C)	61
Max flow rate (m3/h)	360
Mineralisation (g/dm3)	120
Installed geothermal power heat (MWt)	6
Production of geothermal heat (TJ)	64
Number of wells	1+4
Parameters of DH (°C)	95/40 60/45

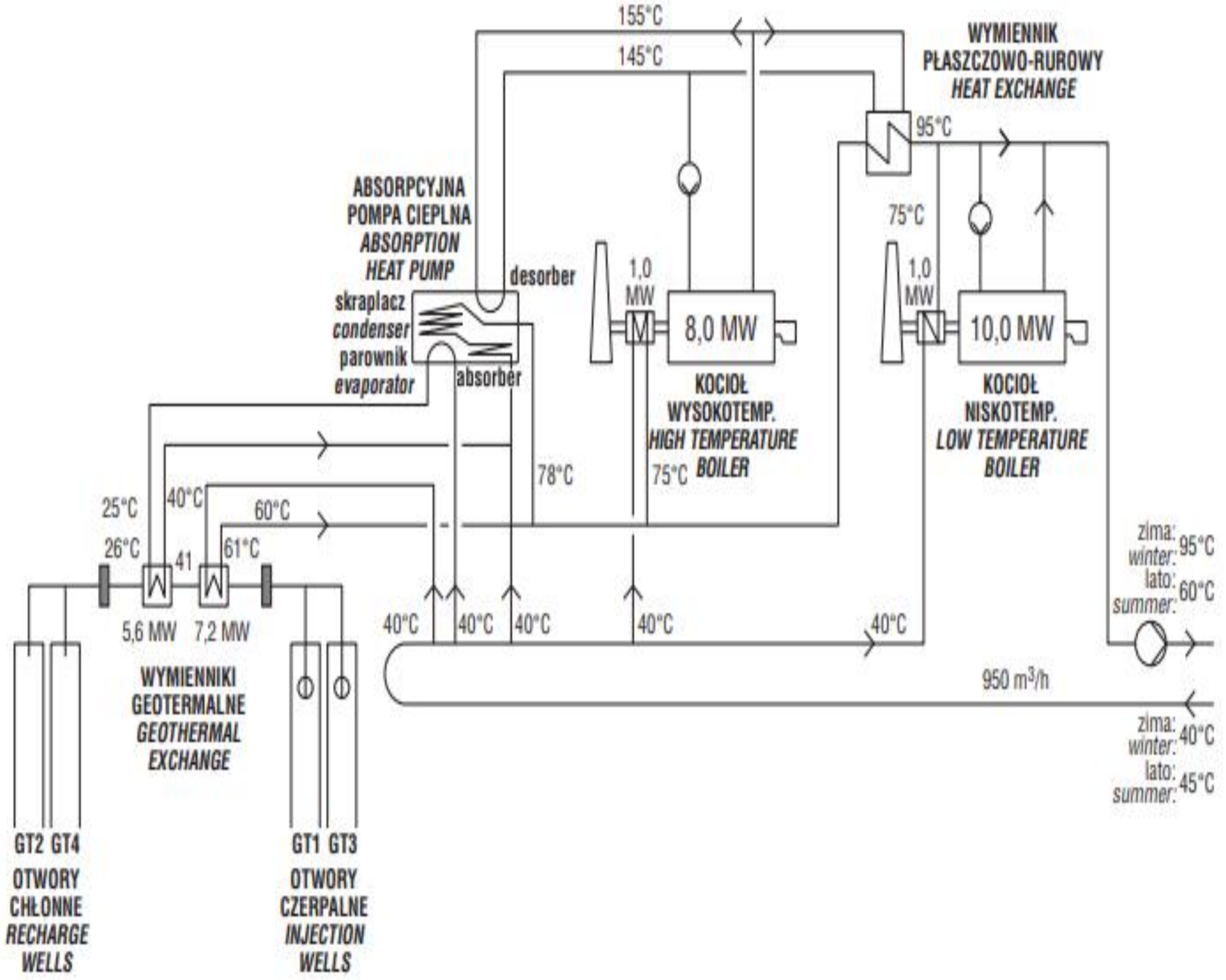


Fig. 6. Technological scheme of geothermal system in Pyrzyce town (Biernat i in. 2010)

Stargard

Temp. at the outflow (°C)	83
Max flow rate (m3/h)	180
Mineralisation (g/dm3)	150
Installed geothermal power heat (MWt)	12,6
Production of geothermal heat (TJ)	186
Number of wells	1+2 (2+2)
Parameters of DH (°C)	125/70

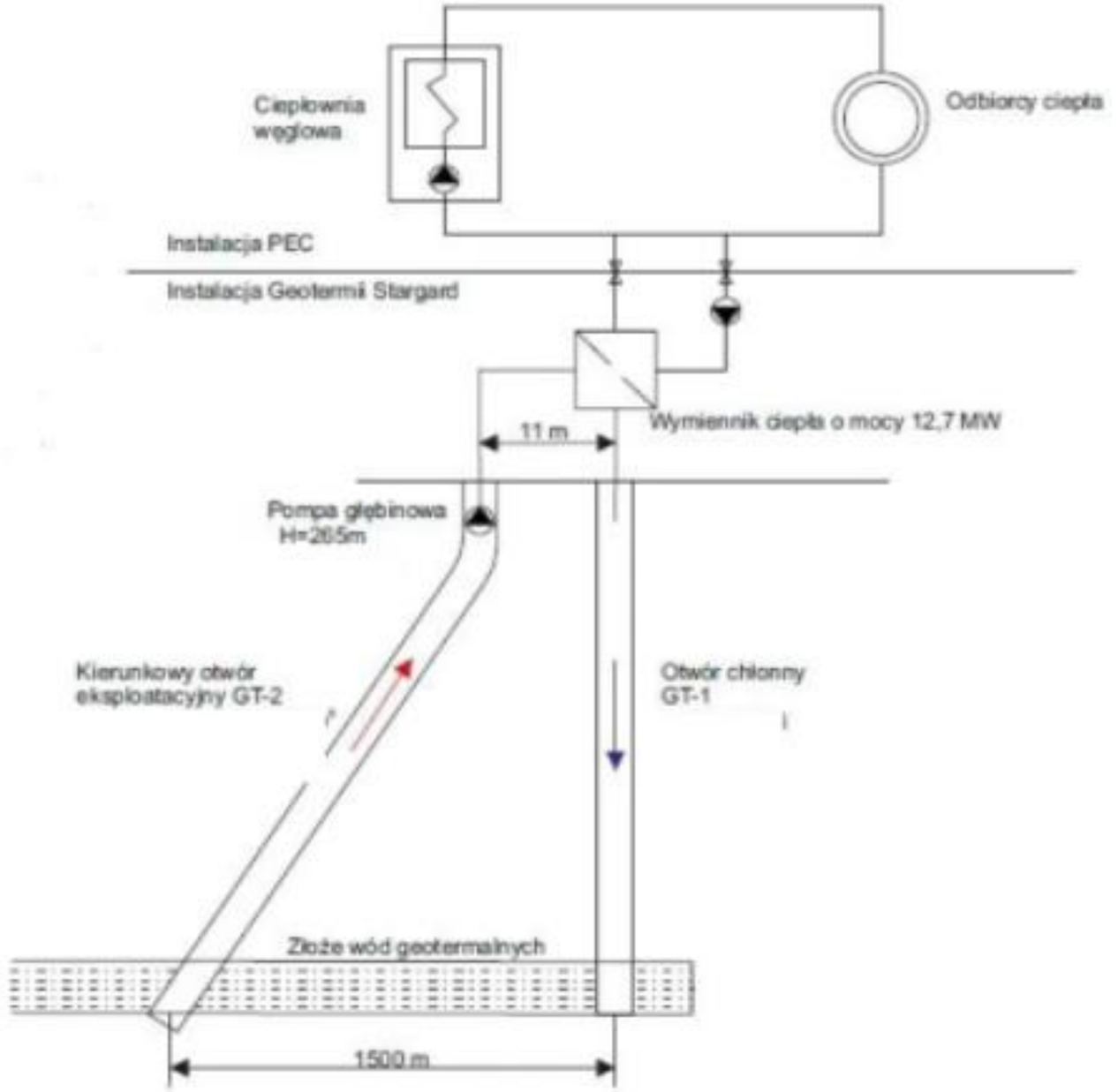
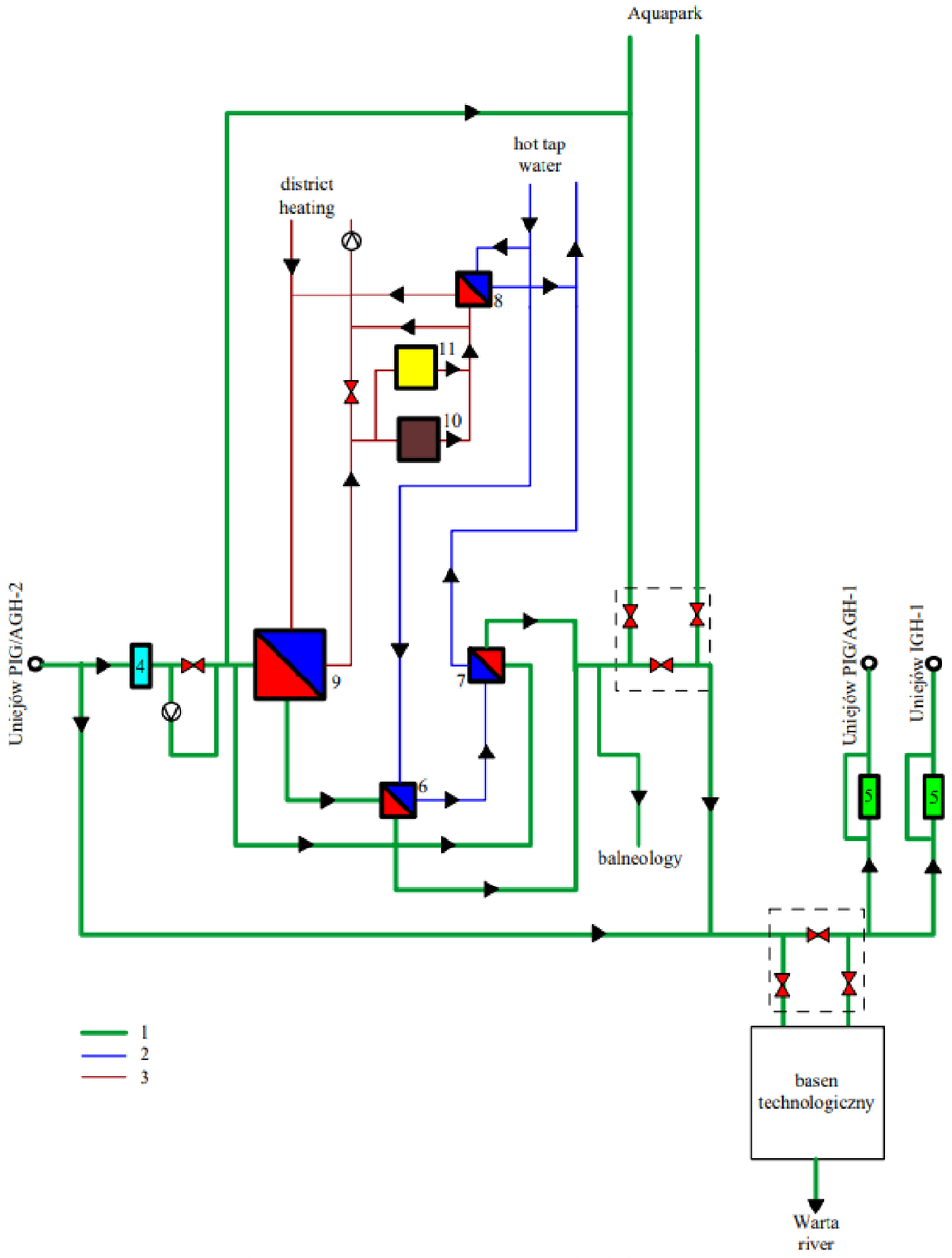


Fig. 7. Technological scheme of geothermal system in Stargard town (G-Term Energy, www.nfosigw)

Uniejów

Temp. at the outflow (°C)	68
Max flow rate (m3/h)	120
Mineralisation (g/dm3)	6-8
Installed geothermal power heat (MWt)	3,2
Production of geothermal heat (TJ)	21
Number of wells	1+2
Parameters of DH (°C)	70/35



Denotations: 1 – geothermal water pipelines; 2 – HTW circulation; 3 – district heating circulation; 4 – bag filters; 5 – candle filters; 6,7 - HTW heat exchangers; 8 – reserving HTW heat exchanger; 9 – central heating exchangers;10 – biomass-fed boilers; 11 – oil boilers

Fig. 8. Technological scheme of Uniejów geothermal system

Current trend in Poland- heat pumps

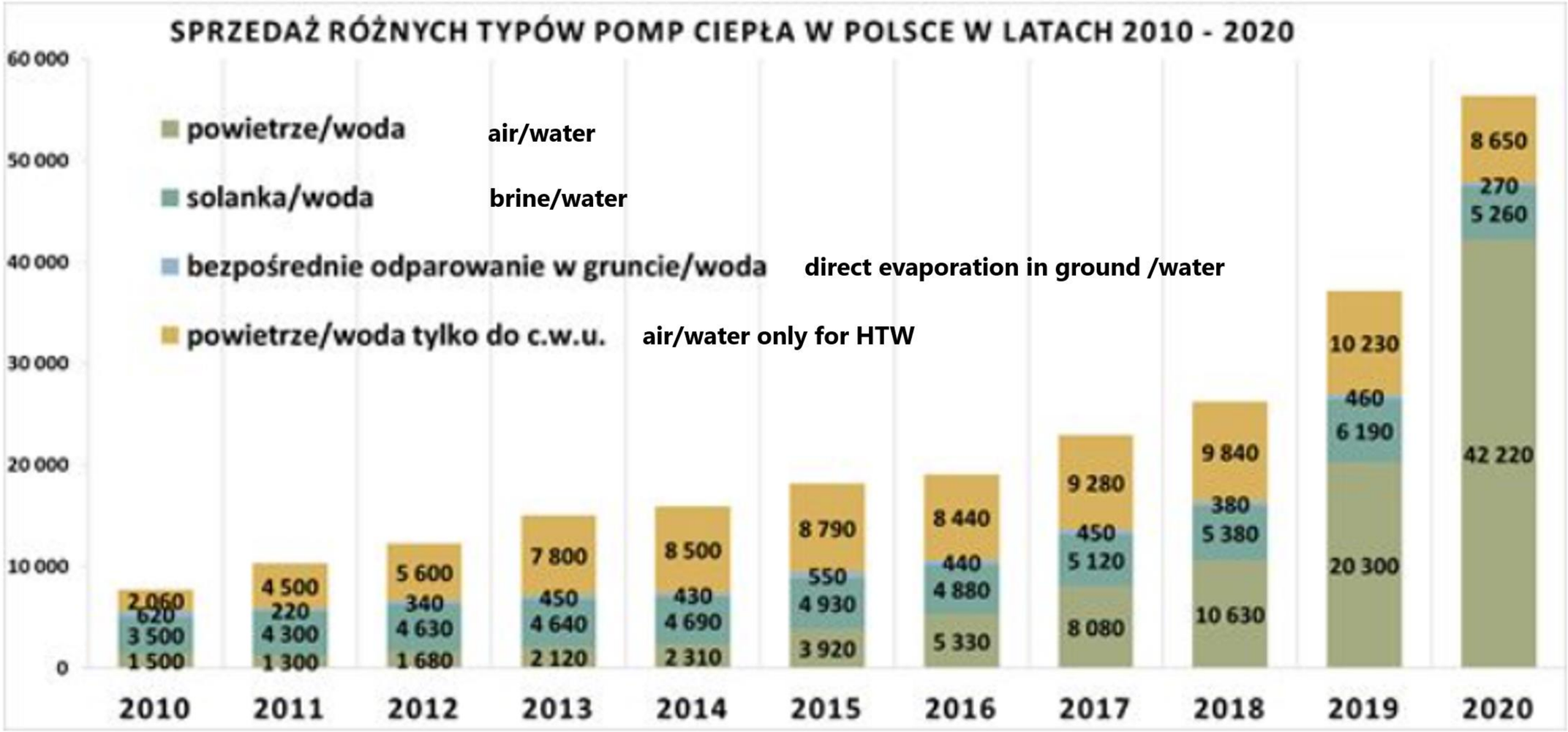


Fig. 9. Sold heat pumps in Poland (Port PC)

Heating plant in Szaflary

Thermal spas

Termy Chochołowskie

Terma Bania

Gorący Potok

Thank you