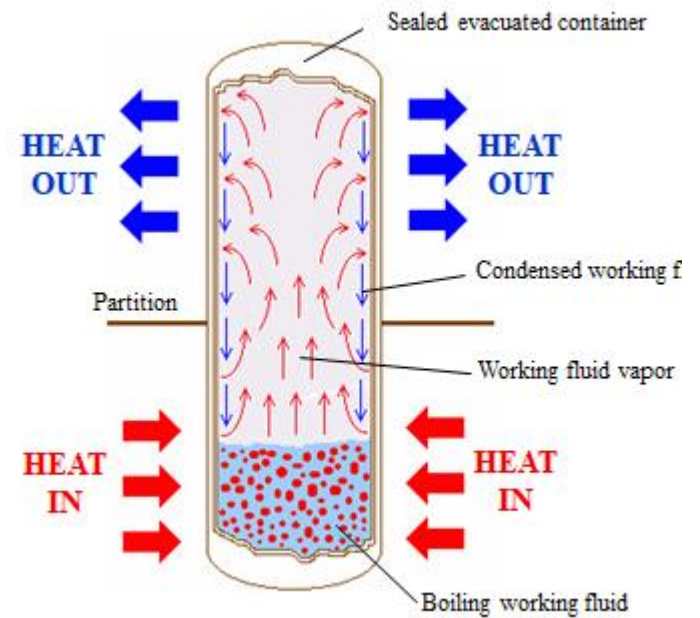


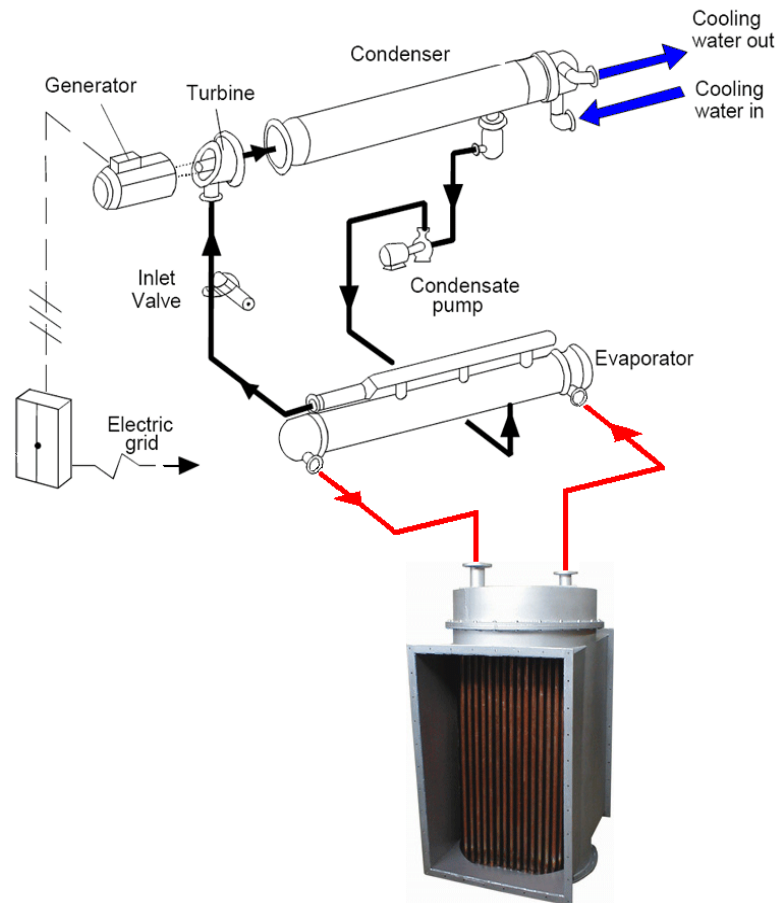
Green Steel Industry...

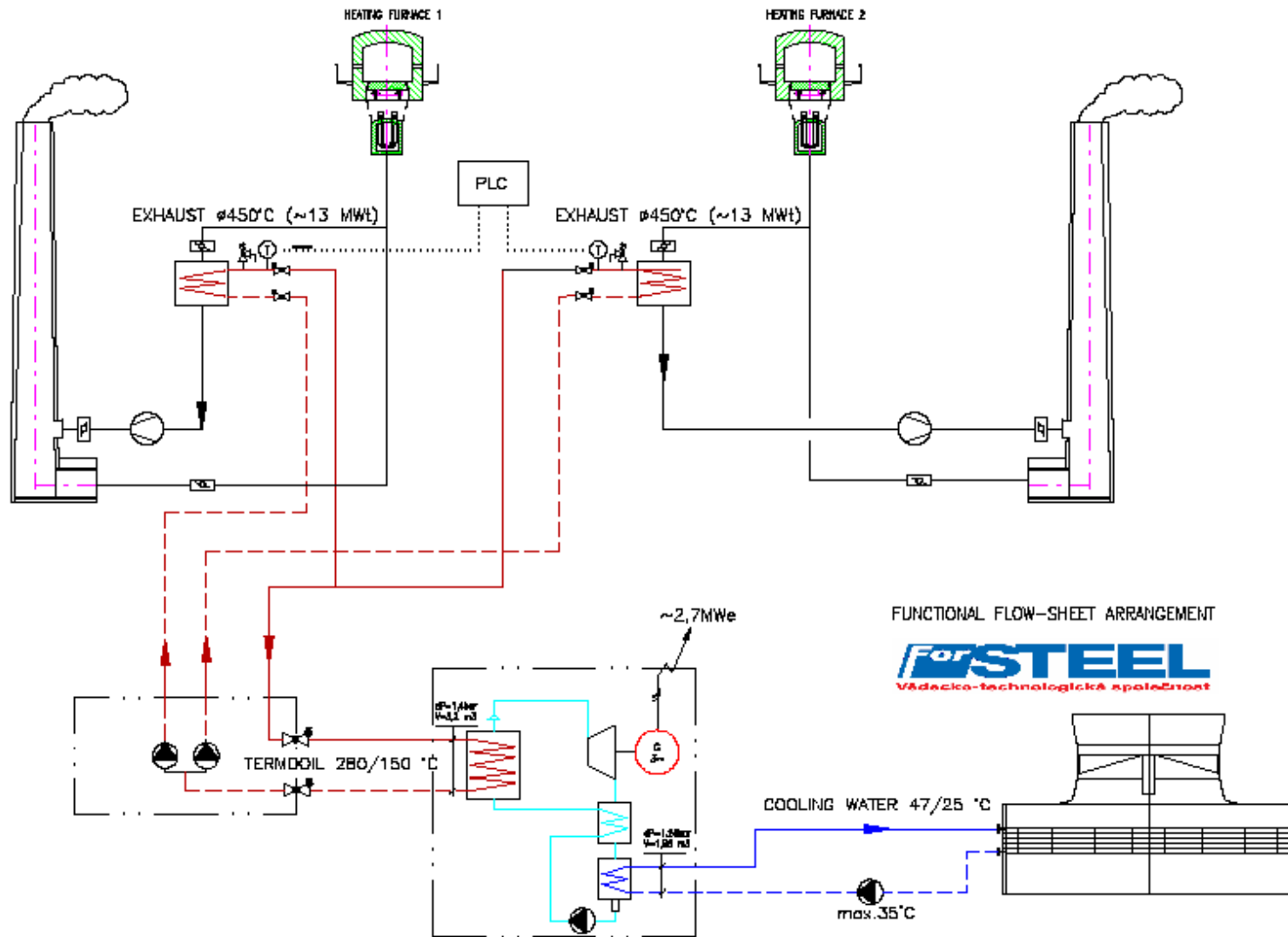
Contradiction or necessary reality?



Utilization of waste heat – „Heat pipes“ technology



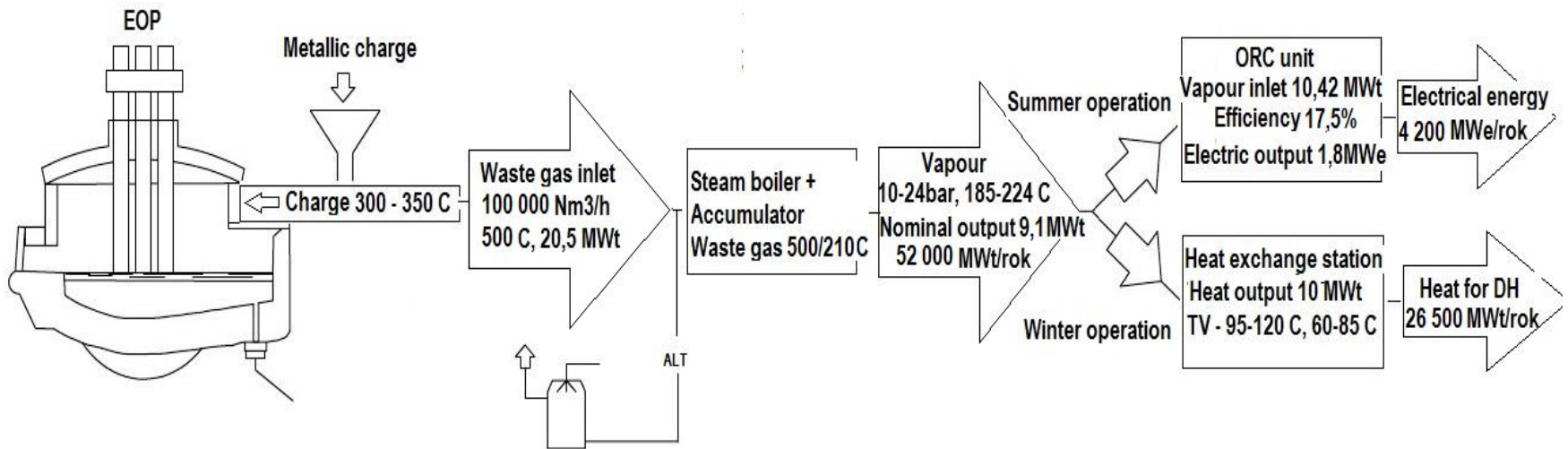


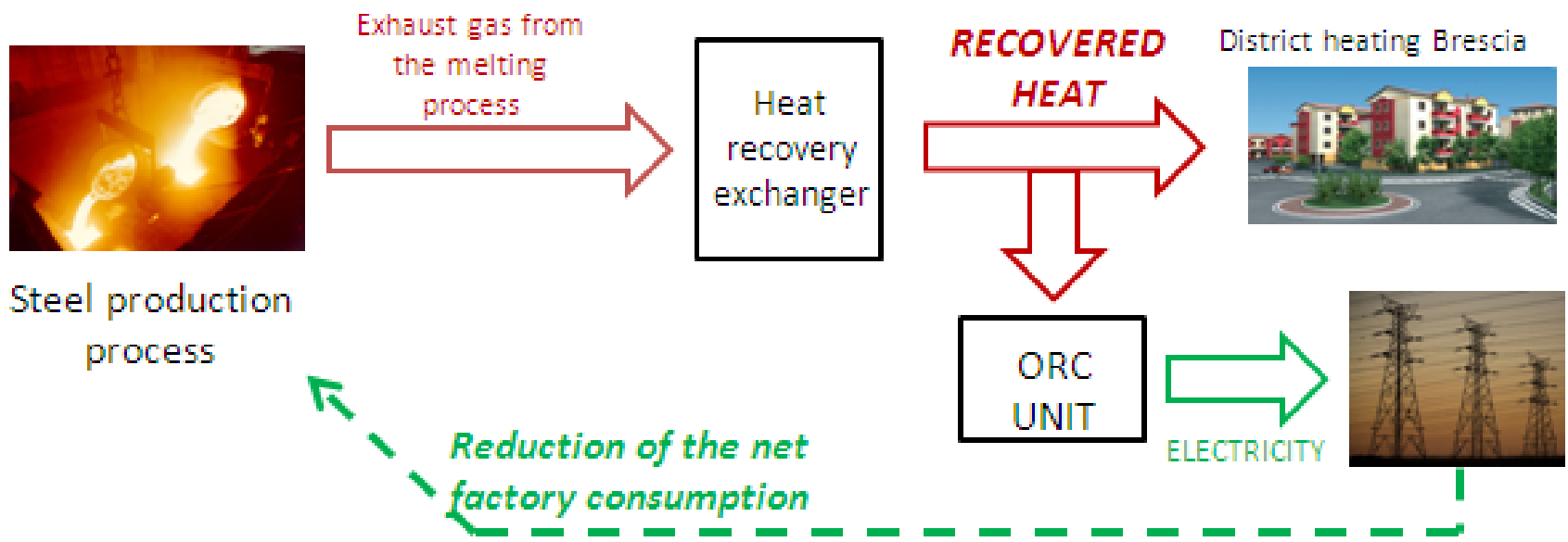


Project EU (FP7, Smart Cities Programme)
2014-2017



Nominal parameters of the project PITAGORAS





Economic model of ROI

Specification of the technical and production parameters of the investment		Unit of measure	Option A Only production of electricity	Option B Production of electricity + heat
Total construction and machinery investment expenses		Thous. €	5 500	5 200
Average annual revenues and savings from operating investments	Annual savings on the purchase of electricity	MWh _e	14 112	11 760
		€/MWh _e	80	80
		Thous. €	1 129	941
	Annual revenues from heat sales	MWh _t	0	16 560
		€/MWh _t	0	19,1
		Thous. €	0	316
	Annual savings on emission allowances for CO ₂	tCO ₂ /MWh	1,6	1,6
		Tons	22 579	18 816
		€/t CO ₂	13	13
		Thous. €	294	245
Total annual revenue and savings		Thous. €	1 423	1 502
Average annual expenditure on operating an investment	Annual maintenance costs	Thous. €	20	20
	Annual operating expenses	Hours	400	400
		€/Hour	15	15
		Thous. €	6	6
	Annual costs – other direct costs	Thous. €	4	4
Total annual operating expenses		Thous. €	30	30
Average annual cash flow from the operation of the investment		Thous. €	1 393	1 472
Simple return on investment		Years	3,95	3,53

Thank you for your attention !

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