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**EEl ASSURANCE**

№DI-189/02.08.2022

Регламент/Regulation (EU) 2015/1187

Product: Solid fuel pellet boiler  
Manufacturer: Mareli Systems Ltd  
Model: SBN 50, ser. № 1204225067  
Requested by: Mareli Systems Ltd  
Sofia, Lyulin district, bl. 821, ap.1

Stoking principle: Automatic  
Test Fuel: Wood pellets (C1) Test report for the fuel № 5328/06.07.2022  
Test procedure: EN 303 – 5:2012  
Test report no: 011/25.04.2022

**Fixed values:**

F (1)	Deduction regarding temperature controls	3 [%]
CC	Conversion coefficient for electricity consumption	2,5 [-]
BLF	Biomass label factor	1,45 [-]

**Test results:**

$\eta_{k \text{ nominal}}$	Efficiency at nominal heat output	95,00 [%]
$\eta_{k \text{ minimum}}$	Efficiency at minimum heat output	95,50 [%]
M	Test fuel, moisture	4,28 [%]
$GCV_{mf}$	Test fuel, gross calorific value, moisture free	20,41 [MJ/kg]
$H_{iW}$	Test fuel, net heating value, with moisture	18,23 [Mj/kg]
$H_{iWf}$	Test fuel, gross heating value, with moisture	19,54 [Mj/kg]
$el_{max}$	Electricity consumption at nominal heat output	0,13 [kW]
$el_{min}$	Electricity consumption at minimum heat output	0,06 [kW]
$P_{SB}$	Electricity consumption in standby mode	0,006 [kW]
$P_n$	Nominal heat output	49,51 [kW]
$P_p$	Minimum heat output	14,82 [kW]

**Calculations**

$\eta_n$	Efficiency at nominal output	88,63 [%]
$\eta_p$	Efficiency at reduced output	89,10 [%]
$\eta_{el,n}$	Electrical efficiency of solid fuel cogeneration boiler	0,00 [%]
$\eta_{son}$	Seasonal space heating energy efficiency in active mode	89,03 [%]
$\eta_s$	Seasonal space heating energy efficiency	85,05 [%]
F(2)	Auxiliary electricity consumption	0,9776 n/a
F(3)	Electrical efficiency of solid fuel cogeneration boilers	0,0000 n/a

**Calculation of the Energy Efficiency index:**

Energy Efficiency:	125,11
Energy Efficiency class:	A++
Energy Efficiency index (EEI)	125 ≤ EEI < 150

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