

**SOUTHERN COMBINED HEAT AND POWER PLANT  
(CHP-PLANT-22)  
BRANCH OF «NEVSKY» OJSC «TGC-1»  
96 Sofijskaya street, 192289 St. Petersburg,  
Tel.: (812)772-19-41, fax: (812)772-03-13,  
e-mail: TEC22@tgk1.ru**

Our ref: 1253/209 dated July 24, 2012

«Northern Interindustry Company  
«The Alternative» Ltd  
For the attention of Technical Director,  
Chief Engineer  
V.I. Mankovsky

21 Karl Marx street, 164500 Severodvinsk,  
Arkhangelsk region, Russia

**About the results of operation**

I forward you the data on the results of operation of CMKA® heat exchange elements installed in regenerative air heater PBII-98 of TFMII-344A boiler unit No.1.

Enclosure:

1. Report list of TFMII-344A boiler unit in 1sheet in 1 copy;
2. Reference (1 sheet, 1 copy)

Chief Engineer

N.A. Ukolov

D.V.Kuzmin  
007 (812) 901-48-07

**List of the main technical and economical indexes of boiler unit  
ТГПМ-334А No.1 of CHP plant-22, «TGC-1 OJSC»**

No	Parameter	Dimension	Until overhaul	After overhaul
			March 03, 2012	June 02, 2012
1	Type of RAH		PБП-98	PБП-98
2	Steam capacity	tons/hour	1000	1000
3	Type of fuel	gas/ mazut	gas	gas
	Fuel consumption	m <sup>3</sup> /hour	25.0	25.5
	Calorie content of fuel	kcal/ m <sup>3</sup>	8024	8035
4	Air inleakage into furnace	%	5.5	5.5
	Excess air coefficient at furnace exit	-	1.045	1.05
	Excess air coefficient before RAH	-	-	-
	Excess air coefficient behind RAH	-	1.365	1.3
5	Gas temperature at RAH inlet	°C	298	300
	Air temperature at RAH inlet	°C	13	39
	Gas temperature at RAH outlet	°C	130	113.5
	Air temperature at RAH outlet	°C	283	300
6	RAH resistance by gas	kgf/m <sup>2</sup>	130	75
	RAH resistance by air	kgf/m <sup>2</sup>	80	48.5
7	Temperature of flue gases	°C	130	113.5
	Heat loss with flue gases	%	6.6	5.1
	Boiler gross efficiency	%	93.20	94.67

\* Note:

On March 03, 2004 during the trials, the guide vanes of gas recirculation fan ДГР-1 А, В were opened for 4/4 % by sides (А/В) respectively, high smoke exhaust load couldn't be possible because of the absence of reserve for draft and blast.

On June 02, 2012 during the trials, the guide vane of ДГР-1В was opened by 60 %, ДГР-1А is on reserve.