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TO WHOMSOEVER IT MAY CONCERN

Subject: Certification of procurements, commissioning & operation of equipment.

I have visited M/s. Big Castings Pvt Ltd, at #75, KIADB Industrial Estate Honaga, Belagavi-591113, Karnataka, manufacturer of steel grade casting for checking the installation of Harmonic Filter. The company has procured Harmonic Filter along with its peripherals

This procurement is as per the grant sanction letter dated 13th April, 2018 from the United Nations Industrial Development Organization (UNIDO) for the implementation of pilot project of 'Harmonics Suppression by Harmonic Filter under the GEF-UNIDO-BEE project on 'Promoting Energy Efficiency and Renewable Energy in selected MSME clusters in India'.

The material received for implementing the project is verified and it is found that material procured is as per the required specifications. The company has also successfully commissioned the equipment at its unit. The equipment is now under operation and is working satisfactory.

I, hereby, certify the commissioning of the Harmonic Filter and its satisfactory operation at M/s. Big Castings Pvt Ltd.

Date: 20/02/2020

Place - Belagavi.

BIG CASTINGS PVT. LTD. BELAGAVI 591166

(Seal and Signature)

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Commissioning Report

As per requirement **Clariant power system Ltd , Pune** supplied 300 KVAr@525V RTPFC Panel to improvement of the power factor & 225 A Active harmonic filters for mitigation of the harmonic level in the system.

Supplied panel 300 KVAr @525V RTPFC is commissioned on dated : 21/10/19 and Active harmonic filter225A is commissioned on dated : 22/10/19 and both are working in good conditions with auto / manual mode.

WORK DONE:

1. Power & control cable connections are checked and found OK.
2. Relay is configured in respect to site conditions.
3. RTPFC system has been charged with 3-phase supply voltage.
4. Current checked and found OK.
5. All steps are running under auto/manual mode.
6. Temperature of the panel is found OK .

Data taken during the commissioning of the RTPFC panel.

Sr No	Step size (KVAr)@525V	Current (A)		
		R	Y	B
1	25	24	23	23
2	50	48	49	49
3	75	72	73	74
4	75	74	73	73
5	75	74	74	73

Voltage at input terminals of RTPFC panel is.

1. RY (Ph – Ph) =415,
2. YB(Ph – Ph) = 417,
3. RB(Ph – Ph) = 418

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BELAGAVI
591156

Power factor before installation of the RTPFC panel.

KWH	KVAH	PF
9480	10620	0.892
3900	4380	0.890

Power factor after installation of the RTPFC panel.

KWH	KVAH	PF
5940	[illegible]	0.951
5700	[illegible]	0.959

After installation of 225A Active harmonic filter the **Harmonic level is reduced to 7 to 8% from 18%**

As per IEEE -519 2014 Standards.

(Arun. Kore)

For M/s Clariant power system Ltd. Pune

For M/s Big Casting Pvt Ltd.

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