

March 7, 2020

To,
 Excelsource International Pvt. Ltd.
 301/302, Sampatti Complex,
 Sardar Baug Lane,
 Race Course,
 Vadodara – 390007
 Gujarat – INDIA

Sub: Appreciation Letter for the Usefulness of IoT Sensors based on
 Thinktank Platform

Kind Attn: Mr. Bhavesh Buddhdev (Managing Director)

Dear Sir,

This refers to above subject, we had installed Total 18 Vibration Sensors and 13 Temperature Sensors in Our 200 TPD Sulfuric Acid plant at Lupoto, in Lubumbashi, Democratic Republic of Congo (DRC) in Central Africa. List of the Sensors and its Location Mentioned in the attached Sheet.

S.NO	ASSET NAME	SECTION	VIB.SENSOR	TEMP.SENSOR
1	Air Blower A	AIR & GAS SECTION	3 (DE, NDE, MOTOR DE)	2 (MOTOR DE, BLOWER BODY)
2	BFW Pump A	BOILER SECTION	3 (DE,NDE, MOTOR DE)	2 (MOTOR DE, PUMP NDE)
3	Condensate tank pump A	DM/RO PLANT	1 (DE PUMP)	1 (MOTOR DE)
4	Acid Circulation Pump A	ACID SECTION	2 (PUMP DE, MOTOR DE)	2 (PUMP DE, MOTOR DE)

5	Cooling Water Cir.Pump A	ACID SECTION	3 (PUMP DE, NDE, MOTOR DE)	2 (MOTOR DE, PUMP DE)
6	Cooling Water Cir.Pump B	TURBINE SECTION	3 (PUMP DE, NDE, MOTOR DE)	2 (MOTOR DE, PUMP DE)
7	Turbine	TURBINE SECTION	3 (DE, NDE, GEARBOX BODY)	2 (TURBINE NDE, GEARBOX BODY)
			18	13

We have been greatly benefitted due to the above sensors based on IoT Technology. We installed the Sensors on 22nd October – 2019 and it is little over 4 months in operations. Following are our observation of the benefits from the same.

1. **Air Blower:** In this Section we have got the benefits of the Abnormal Vibration Alarm 2 times and due to which we could Identify One Crack on the body and we repaired it, and also, we cleaned the Filter and so Vibration could be Reduced in the Required Level.
2. **BFW Pump:** In this Section earlier, we were doing Oil change every 15 days, but Due to report from the Vibration and Temperature Sensors we are changing the Oil as and when we get Alarm from the ThinkTank Platform.
3. **Condensate Tank Pump:** Due to this system we could control our Maintenance as and when required.
4. **Acid Circulation Pump:** This is our Most Critical Asset and in the 4th Week of February-2020, we observed the trend in the Vibration Increased, so we immediately checked the Pump and Found that there was Excess Acid coming from the Leak off Line which was Transmitting Vibration to the Sensors. Based on the same we removed the pump and put a Stand By pump, and here we avoided Major Damage to the ACP worth USD 34,000.00 and also could avoid few hours Production loss.
5. **Cooling Tower Pumps (Acid and Turbine Section) :** We could reduce the Frequency of Preventive Maintenance and thus major saving in Spares and Manpower time could be saved.
6. **Turbine Sensors:** It helps us cross Checking the Data from OEM Given Panels and thus we have one more Back Data.

Overall what we found from the Investment in the Same is that We could Recover the Investment less than Six Months and overall it has helped our Maintenance Team to focus on more important plant

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operations activity and we can now state that the information from the Sensors via Thinktank Platform are reliable to base our decision for carrying out our various maintenance activities. We appreciate Efforts put by Excelsource Team and IRIS Energy LLC USA team for Various Sensors and the Predictive Platform.

We intend to Incorporate and Install More Sensors which will now be placed on other assets to make the Operations More Robust and Reliable.

We would recommend the Thinktank IoT Platform for any Industries that may wish to derive benefits from IoT Technology.

For SOMIKA SARL (SAP Division)


07/03/2020

V P Yadav

GM (Operation) & Plant Head



Virender Singh

GM (Production)

V P Yadav
GM (Operations) & Unit Head
SAP, Power & Utilities Plant,
Lupoto, Lubumbashi, DRC

