



ISSUE 05 | VOL 01 | 1st August 2021

Ebara Custom Pump's Global Community Newsletter

CONTENTS:

1. Remote monitoring system
2. Quotation status check using RPA
3. Overseas Project Risk Management

A PLATFORM TO CONNECT OVERSEAS MEMBERS OF EBARA CUSTOM PUMP FAMILY

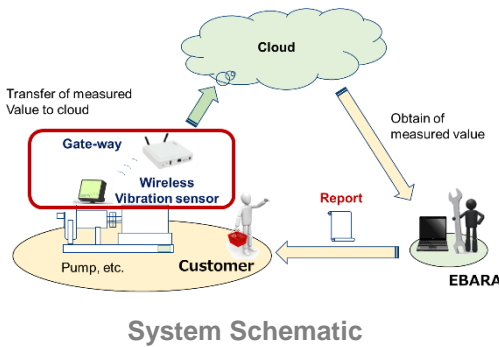
ADVANCED TECHNOLOGY

Introduction to Remote Monitoring System

There are many factors which affect continuous operation of plant equipment. Due to this, customers face troubles in maintaining a healthy condition of the equipment at site. In an attempt to offer solution to this problem, EC has been working to provide a 'Remote Monitoring System' to our customers within Japan on trial basis. The system consists of wireless sensors installed on the equipment at site which transmit vibration and temperature readings at regular intervals to a cloud network. EC will periodically monitor this data (vibration and surface temperature) for pumps and will be able to predict faults and errors in the machine using statistics and algorithms. EC aims to provide preventive maintenance solutions to the customer in order to avoid complete breakdown of the equipment in the future, thus reducing the machine downtime. This will help in saving costs for maintenance & downtime and improve the personal safety for operators.

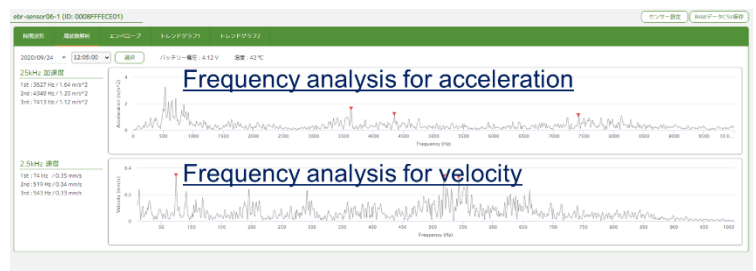
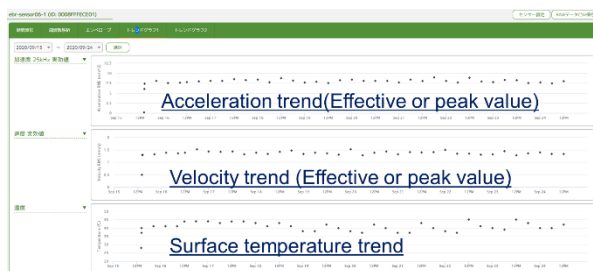
Key specifications - Vibration Sensor

- Measurement range: 10 – 10,000Hz
- Connection with Gate-way: Bluetooth or LoRa, switchable (Selection will be depend on site condition)
- Power: Built-in secondary battery (Batter life is depend on measurement interval)
- Installation method: Magnet, bond or screw (Easy installation on existing equipment)



Analysis of measured data:

Measured data can be analyzed by several means. Normally as the trend check of the subjected equipment, acceleration for high frequency range, velocity for low frequency range and surface temperature will be monitored periodically from measured data. If any abnormal conditions are observed during the daily trend check, frequency analysis will be implemented for a detailed investigation to try and find the cause of the abnormal condition. The charts of trend monitoring and detailed investigation are indicated as below.



Future scope:

Monitoring services with IoT are trending globally and the market potential will keep growing due its large demand. EC will acquire the knowhow from the experience of the above trials and utilize it to expand the S&S business. The market information like customer's voice, provided by each overseas subsidiary will also be helpful for the success of this project.

