ISA Delhi Section

Setting the Standard for Automation™

Vibration Monitoring System

Forbes Marshall Pvt. Ltd.

ISA-D: “Fertiliser , Food and Pharma Symposium-2023”

Agenda

- Brief Introduction
- Basic and benefits for growth
- Offering range meeting the industrial need
- Q&A

Brief Introduction

- 1926 : Company Started
- 5 Manufacturing Facilities in India.
- 300+ Engineering Products & Solutions.
- 1515 Trained Professionals with
  300 Sales & Services Engineers.
- 90 R&D Professionals.
- 3 Joint Venture Companies.
- 15000+ Customers in
  India & Globally.

Process automation & control instrumentation

Flow & Level

Flow Meters : Magnetic , Ultrasonic, Mass Flow, Variable Area & Vortex.
Level : Radar, Magnetic, Ultrasonic & Vibration.

Valves

Control & Process Valves, Safety Valves, DeSuperheater, Stop and Check Valves, High Pressure Valves, Turbine Bypass Valves

Emission Monitoring

Insitu CO,SO2, Nox Gas Monitors & Dust Monitors for Online stack Emission Monitoring

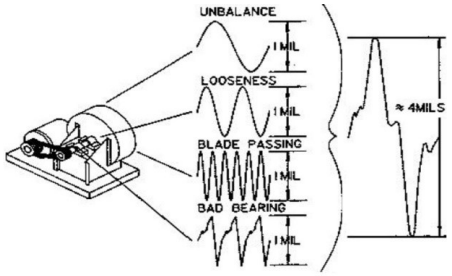
Vibration Monitoring

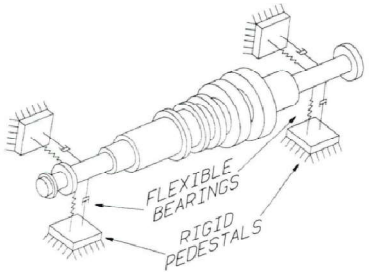
Vibration Sensors
Monitoring System
Analysis & Diagnosis Software
Vibration Audit Services.

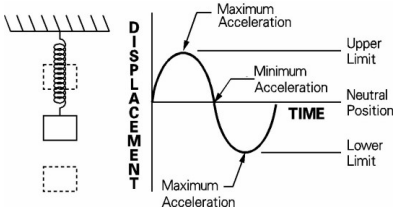
M/s Shinkawa Electric Co. Japan

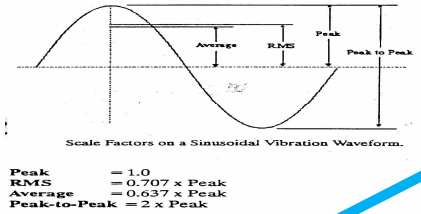
- 75 Year Old Company
- API – Task Force Member (API-670)
- Exclusively Represented in India
  by Forbes Marshall Pvt Ltd.

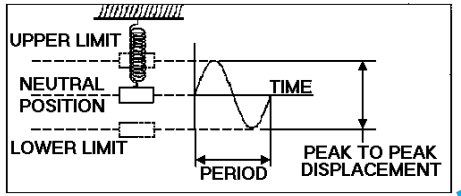
Basic , Benefits for Growth







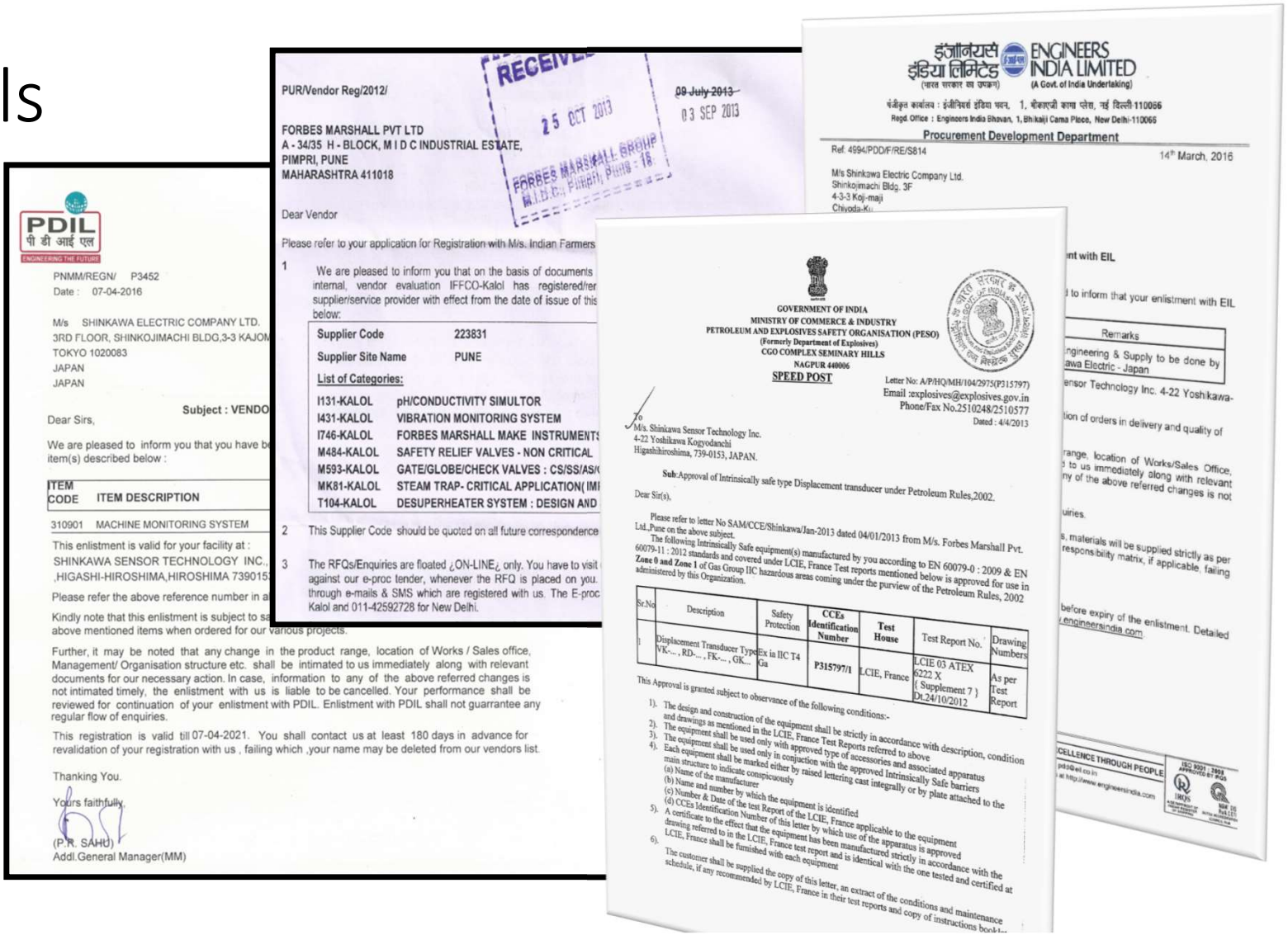




1. EX/Atex Certified
2. Geo (Anticorrosive later coated)
3. API-670 Compliance are taken care

Approvals

- PDIL
- EIL
- IFFCO Kalol
- CCOE



PDIL
पी डी आई एल
ENGINEERING THE FUTURE

PNMM/REGN/ P3452
Date : 07-04-2016

M/s SHINKAWA ELECTRIC COMPANY LTD.
3RD FLOOR, SHINKOJIMACHI BLDG,3-3 KAJOM
TOKYO 1020083
JAPAN
JAPAN

Subject : VENDO

Dear Sirs,

We are pleased to inform you that you have b
item(s) described below :

ITEM CODE	ITEM DESCRIPTION
310901	MACHINE MONITORING SYSTEM

This enlistment is valid for your facility at :
SHINKAWA SENSOR TECHNOLOGY INC.,
,HIGASHI-HIROSHIMA,HIROSHIMA 739015

Please refer the above reference number in a

Kindly note that this enlistment is subject to sa
above mentioned items when ordered for our various projects.

Further, it may be noted that any change in the product range, location of Works / Sales office, Management/ Organisation structure etc. shall be intimated to us immediately along with relevant documents for our necessary action. In case, information to any of the above referred changes is not intimated timely, the enlistment with us is liable to be cancelled. Your performance shall be reviewed for continuation of your enlistment with PDIL. Enlistment with PDIL shall not guarrantee any regular flow of enquiries.

This registration is valid till 07-04-2021. You shall contact us at least 180 days in advance for revalidation of your registration with us , failing which ,your name may be deleted from our vendors list.

Thanking You.

Yours faithfully,

(P.R. SAHU)
Addl.General Manager(MM)

PUR/Vendor Reg/2012/

RECEIVED
25 OCT 2013
FORBES MARSHALL GROUP
M.I.D.C., Pimpri, Pune - 18

~~09 July 2013~~
03 SEP 2013

FORBES MARSHALL PVT LTD
A - 34/35 H - BLOCK, M I D C INDUSTRIAL ESTATE,
PIMPRI, PUNE
MAHARASHTRA 411018

Dear Vendor

Please refer to your application for Registration with M/s. Indian Farmers

1 We are pleased to inform you that on the basis of documents internal, vendor evaluation IFFCO-Kalol has registered/re supplier/service provider with effect from the date of issue of this below:

Supplier Code	223831
Supplier Site Name	PUNE

List of Categories:

I131-KALOL	pH/CONDUCTIVITY SIMULTOR
I431-KALOL	VIBRATION MONITORING SYSTEM
I746-KALOL	FORBES MARSHALL MAKE INSTRUMENTS
M484-KALOL	SAFETY RELIEF VALVES - NON CRITICAL
M593-KALOL	GATE/GLOBE/CHECK VALVES : CS/SS/AS/(
MK81-KALOL	STEAM TRAP- CRITICAL APPLICATION(IMI
T104-KALOL	DESUPERHEATER SYSTEM : DESIGN AND

2 This Supplier Code should be quoted on all future correspondence

3 The RFQs/Enquiries are floated ¿ON-LINE¿ only. You have to visit against our e-proc tender, whenever the RFQ is placed on you. through e-mails & SMS which are registered with us. The E-proc Kalol and 011-42592728 for New Delhi.

इंजीनियर्स इंडिया लिमिटेड (भारत सरकार का उपक्रम)
ENGINEERS INDIA LIMITED (A Govt. of India Undertaking)

पंजीकृत कार्यालय : इंजीनियर्स इंडिया भवन, 1, भीकाएजी कामा प्लेस, नई दिल्ली 110066
Regd. Office : Engineers India Bhavan, 1, Bhikaiji Cama Place, New Delhi-110066

Procurement Development Department

Ref. 4994/PDD/F/RE/S814

14th March, 2016

M/s Shinkawa Electric Company Ltd.
Shinkojimachi Bldg. 3F
4-3-3 Koji-maji
Chiyoda-Ku

nt with EIL

to inform that your enlistment with EIL

Remarks
ngineering & Supply to be done by awa Electric - Japan

ensor Technology Inc. 4-22 Yoshikawa-

tion of orders in delivery and quality of

range, location of Works/Sales Office, to us immediately along with relevant ny of the above referred changes is not

uiries.

s, materials will be supplied strictly as per respons ibility matrix, if applicable, failing

before expiry of the enlistment. Detailed engineersindia.com

ICELLENCE THROUGH PEOPLE

GOVERNMENT OF INDIA
MINISTRY OF COMMERCE & INDUSTRY
PETROLEUM AND EXPLOSIVES SAFETY ORGANISATION (PESO)
(Formerly Department of Explosives)
CGO COMPLEX SEMINARY HILLS
NAGPUR 440006

SPEED POST

Letter No: A/P/HQ/MH/104/2975(P315797)
Email :explosives@explosives.gov.in
Phone/Fax No.2510248/2510577
Dated : 4/4/2013

To
M/s. Shinkawa Sensor Technology Inc.
4-22 Yoshikawa Kogyodanchi
Higashihiroshima, 739-0153, JAPAN.

Sub:Approval of Intrinsically safe type Displacement transducer under Petroleum Rules,2002.

Dear Sir(s),

Please refer to letter No SAM/CCE/Shinkawa/Jan-2013 dated 04/01/2013 from M/s. Forbes Marshall Pvt. Ltd.,Pune on the above subject.

The following Intrinsically Safe equipment(s) manufactured by you according to EN 60079-0 : 2009 & EN 60079-11 : 2012 standards and covered under LCIE, France Test reports mentioned below is approved for use in **Zone 0 and Zone 1** of Gas Group IIC hazardous areas coming under the purview of the Petroleum Rules, 2002 administered by this Organization.

Sr.No	Description	Safety Protection	CCEs Identification Number	Test House	Test Report No.	Drawing Numbers
1	Displacement Transducer Type VK-... , RD-... , FK-... , GK...	Ex ia IIC T4 Ga	P315797/1	LCIE, France	LCIE 03 ATEX 6222 X { Supplement 7 } Dt.24/10/2012	As per Test Report

This Approval is granted subject to observance of the following conditions:-

1). The design and construction of the equipment shall be strictly in accordance with description, condition and drawings as mentioned in the LCIE, France Test Reports referred to above
2). The equipment shall be used only with approved type of accessories and associated apparatus
3). The equipment shall be used only in conjuction with the approved Intrinsically Safe barriers
4). Each equipment shall be marked either by raised lettering cast integrally or by plate attached to the main structure to indicate conspicuously
(a) Name of the manufacturer
(b) Name and number by which the equipment is identified
(c) Number & Date of the test Report of the LCIE, France applicable to the equipment
(d) CCEs Identification Number of this letter by which use of the apparatus is approved
5). A certificate to the effect that the equipment has been manufactured strictly in accordance with the drawing referred to in the LCIE, France test report and is identical with the one tested and certified at LCIE, France shall be furnished with each equipment
6). The customer shall be supplied the copy of this letter, an extract of the conditions and maintenance schedule, if any recommended by LCIE, France in their test reports and copy of instructions book

API-670 Parameters

1. Casing Vibration
2. Radial shaft displacement
3. Axial shaft displacement
4. Piston rod drop
5. Differential expansion
6. Rotor speed
7. Rotor acceleration
8. Rotor over speed
9. Phase reference
10. Valve position
11. Casing expansion
12. Critical machine temperature
13. Documentation

Contact Type

Non Contact Type

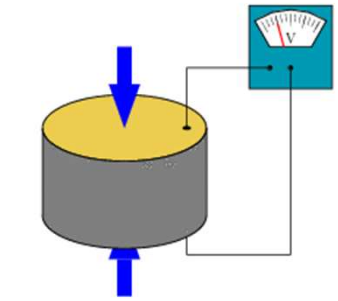
Linear Motion

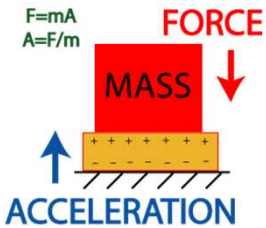
Gen Winding Temp

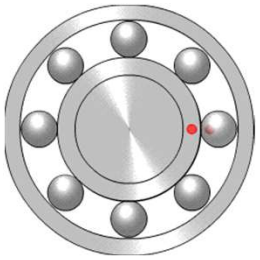
API-670 Limiting values

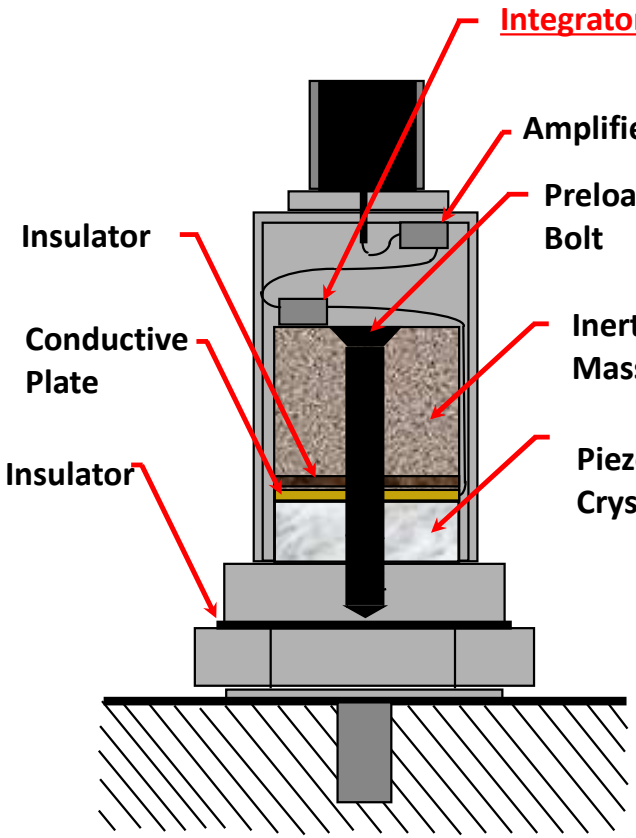
Temperature			Accuracy Requirements as a Function of Temperature	
Components	*Testing Range*	*Operating Range*	*Within Testing Range*	*Outside Testing Range but Within Operating Range*
Proximity probes	0°C to 45°C (32°F to 110°F)	–35°C to 120°C (–30°F to 250°F)	Incremental Scale Factor: ± 5% of 7.87 mV/µm (200 mV/mil)	Incremental Scale Factor: An additional ±5% of the testing range accuracy
Extension cables	0°C to 45°C (32°F to 110°F)	–35°C to 65°C (–30°F to 150°F)	Deviation from Straight Line: within ±25.4 µm (±1 mil) of the best fit straight line at a slope of 7.87 mV/µm (200 mV/mil)	Deviation from Straight Line: within ±76 µm (±3 mils) of the best fit straight line at a slope of 7.87 mV/µm (200 mV/mil)
Oscillator-demodulators	0°C to 45°C (32°F to 110°F)	–35°C to 65°C (–30°F to 150°F)	Minimum linear range: 2 mm (80 mils)	Minimum linear range: same as for testing range
Accelerometers and accelerometer extension cables	20°C to 30°C (68°F to 86°F)	–55°C to 120°C (–65°F to 250°F)	• Principal Axis Sensitivity: 100 mV/g ±5% • Amplitude Linearity: 1% from 0.1 g pk to 50 g's pk • Frequency Response: ±3 dB from 10 Hz to 10 kHz, referenced to the actual measured principal axis sensitivity.	Principal Axis Sensitivity: 100 mV/g ±20%
Temperature sensors and leads	0°C to 45°C (32°F to 110°F)	–35°C to 175°C (–30°F to 350°F)	±2°C (±4°F) over a measurement range from –20°C to 150°C (0°F to 300°F)	±3.7°C (±7°F) over a measurement range from –20°C to 150°C (0°F to 300°F)
Monitor system components for measuring				
Radial Vibration, Axial Position, Piston Rod Drop, and Casing Vibration	0°C to 45°C (32°F to 110°F)	–20°C to 65°C (0°F to 150°F)	±1% of full scale range for the channel	Same as for testing range
Temperature			±1°C (±2°F)	Same as for testing rang
Speed and Over speed				Same as for testing range

For Low Duty Machines

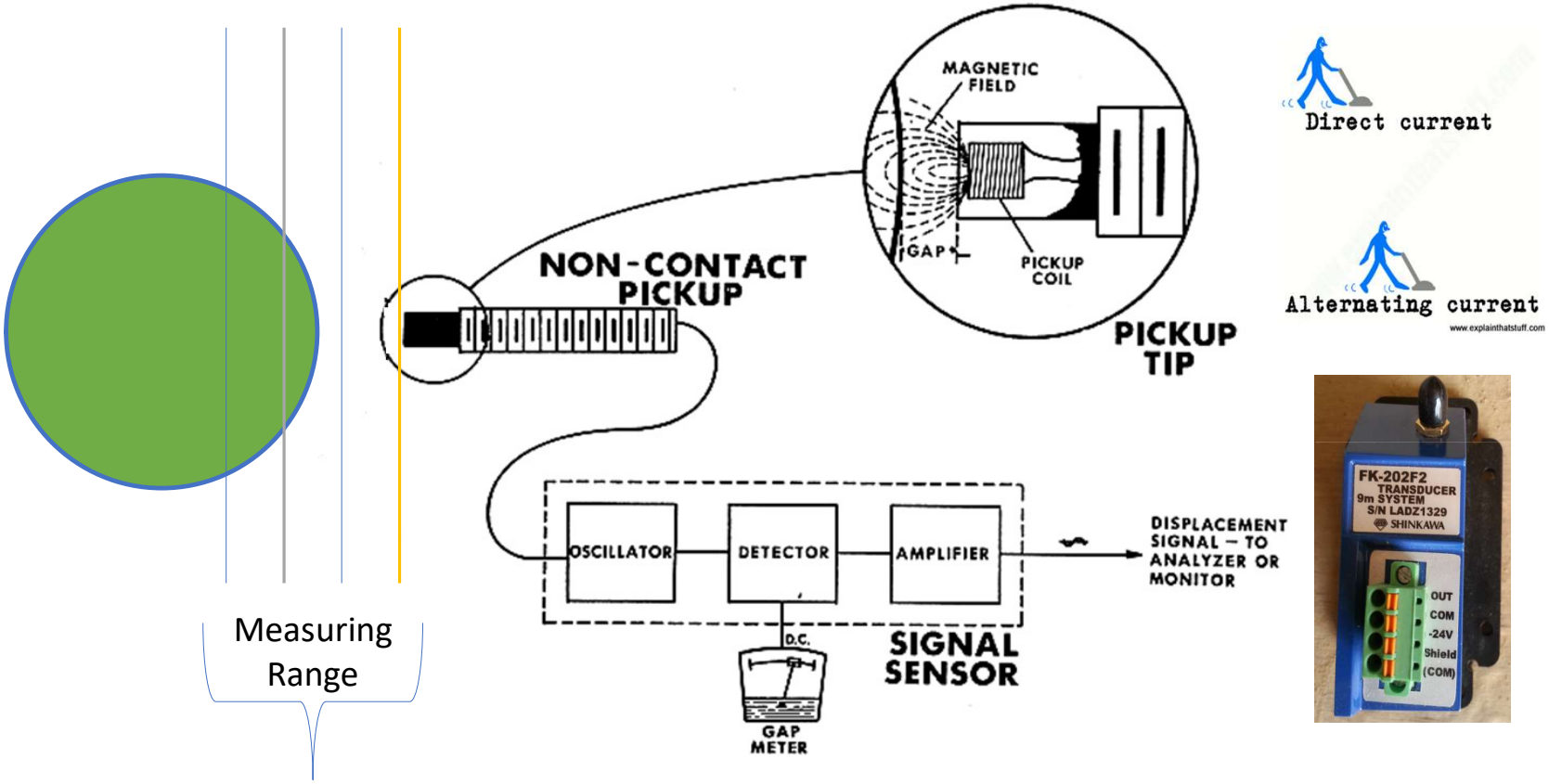








For Heavy Duty Machines



Zuary Agro Goa

Name of Machines: Syngas & Ammonia Compressor , TG Sets , Carbamite Pump (Old Monitor Replacements)
Products : SEC FK series, CA & CV series Sensors , VM-7B Monitor
Key Factors :
Step 1 : Kept Old Sensors intact and installed Monitoring System
Step 2 : Replaced Old Sensors with New API670 Sensors including Ammonia Applications.
Zero Failures at Ammonia Probe since last 7 Years

adventz

Date – 17.03.2016

To whomsoever may concern

We here by confirming M/s Forbes Marshall / Shinkawa replaced old Bentley vibration Monitoring systems at turbo driven machines like Synthesis compressor ,air compressor as well as ammonia compressor. Offered VM-7 series Rack based system is working satisfactory since Year 2010-11 without any issue.

P. V. Kinnerkar
Chief-Manager Instruments,
Zuari Agro Chemicals Ltd.,
Goa.

ZUARI AGRO CHEMICALS LIMITED
(Formerly known as Zuari Holdings Limited)
Registered Office : Jai Kisan Bhawan, Zuarinagar, Goa - 403 726, India.
Telephone : (0832) 2592180, 2592191, Fax : (0832) 2555279, CIN L65910GA2009PLC006177
Website : www.zuari.in

Kribhco Surat

Name of Machines : Ammonia Compressors – 2 Sets
(Old Monitors Replacements)
Products : SEC FK series, CA & CV series Sensors , VM-7B Monitc
Key Factors :
Replaced Old Sensors with New API670 Sensors & Monitoring U

Running Successfully since 2011.]

KRIBHCO
Cooperative and beyond...

कृषक भारती कोआपरेटिव लिमिटेड
पी. ओ. कृभको नगर, सूरत-394 515 (गुजरात) भारत
KRISHAK BHARATI COOPERATIVE LIMITED
P.O. KRIBHCO NAGAR, SURAT-394 515 (GUJARAT) INDIA

दूरभाष/Tel. : (0261) 2862766 to 68
[redacted]
E-mail : piushkumar@kribhco.net

PURCHASE DEPTT.

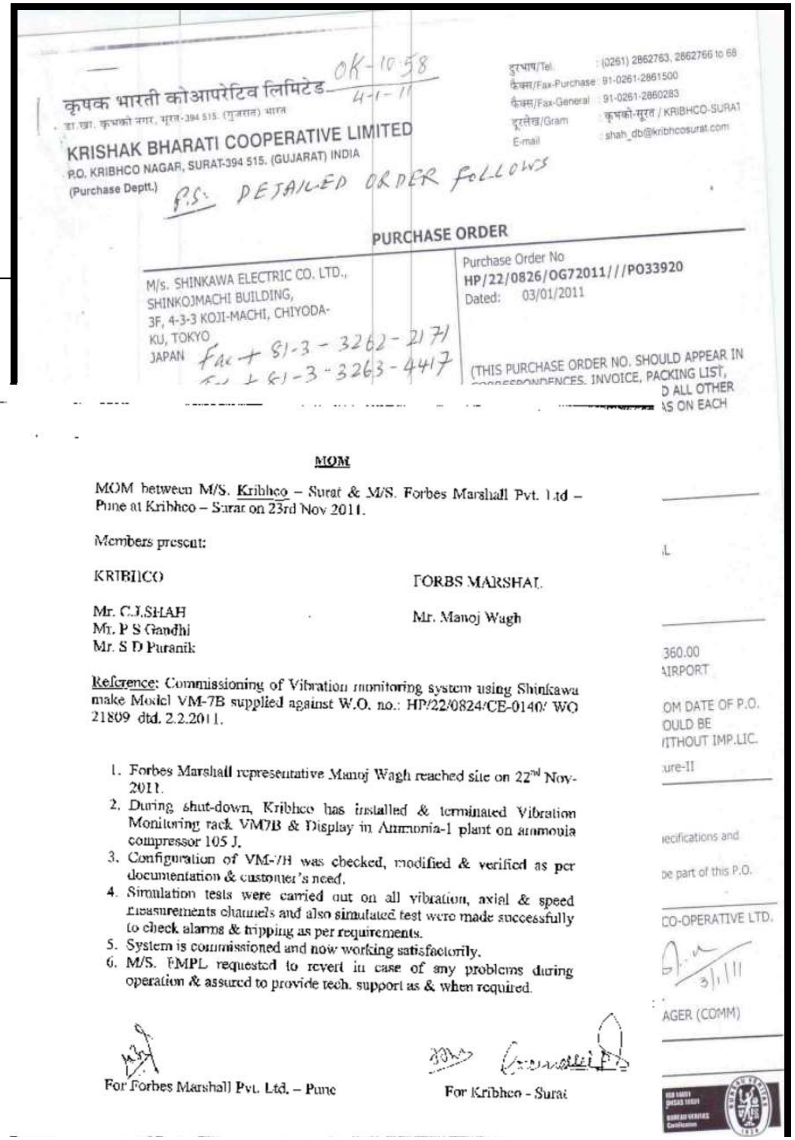
LETTER OF INTENT

LOI / PO no. 5019087 **Date: 05.04.2023**

FORBES MARSHALL PVT. LTD.
PLOT NO. B-85, PHASE-II, CHAKAN INDL. AREA
VILLAGE SAVARDARI-CHAKAN, TAL; KHED – 410501, DIST. PUNE
GSTIN: 27AAACF2630E1Z5

Kind Attn: **Sh.** Neel Naik **Email**: nnaik@forbesmarshall.com

Sub: Supply & Commissioning Assistance for Vibration Monitoring Systems and Filed Sensors



कृषक भारती कोआपरेटिव लिमिटेड OK-10.58 4-1-11
KRISHAK BHARATI COOPERATIVE LIMITED
P.O. KRIBHCO NAGAR, SURAT-394 515. (GUJARAT) INDIA
(Purchase Deptt.)

दूरभाष/Tel. : (0261) 2862763, 2862766 to 68
फैक्स/Fax-Purchase : 91-0261-2861500
फैक्स/Fax-General : 91-0261-2860283
दूरलेख/Gram : कृभको-सूरत / KRIBHCO-SURAT
E-mail : shah_db@kribhcosurat.com

P.S: DETAILED ORDER FOLLOWS

PURCHASE ORDER

M/s. SHINKAWA ELECTRIC CO. LTD.,
SHINKOJMACHI BUILDING,
3F, 4-3-3 KOJI-MACHI, CHIYODA-KU, TOKYO
JAPAN Fax + 81-3-3262-2171 + 81-3-3263-4417

Purchase Order No
HP/22/0826/OG72011///PO33920
Dated: 03/01/2011

(THIS PURCHASE ORDER NO. SHOULD APPEAR IN CORRESPONDENCES. INVOICE, PACKING LIST, D ALL OTHER AS ON EACH

MOM

MOM between M/S. Kribhco – Surat & M/S. Forbes Marshall Pvt. Ltd – Pune at Kribhco – Surat on 23rd Nov 2011.

Members present:

KRIBHCO	FORBS MARSHAL
Mr. C.J.SHAH	Mr. Manoj Wagh
Mr. P S Gandhi	
Mr. S D Puranik	

Reference: Commissioning of Vibration monitoring system using Shinkawa make Model VM-7B supplied against W.O. no.: HP/22/0824/CE-0140/ WO 21809 dtd. 2.2.2011.

1. Forbes Marshall representative Manoj Wagh reached site on 22nd Nov-2011.
2. During shut-down, Kribhco has installed & terminated Vibration Monitoring rack VM7B & Display in Ammonia-1 plant on ammonia compressor 105 J.
3. Configuration of VM-7B was checked, modified & verified as per documentation & customer's need.
4. Simulation tests were carried out on all vibration, axial & speed measurements channels and also simulated test were made successfully to check alarms & tripping as per requirements.
5. System is commissioned and now working satisfactorily.
6. M/S. FMPL requested to revert in case of any problems during operation & assured to provide tech. support as & when required.

For Forbes Marshall Pvt. Ltd. – Pune

For Kribhco - Surat

360.00 IRPORT
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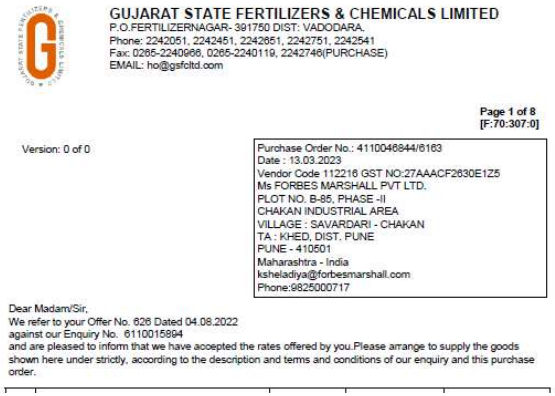
ecifications and
be part of this P.O.
CO-OPERATIVE LTD.
3/1/11
AGER (COMM)

GSFC Baroda

Name of Machines : Ammonia Compressor (Melamine 3)(Old Monitors Replacements)
Products : SEC FK series, CA & CV series Sensors , VM-7B Monitor
Key Factors :
Replaced Old Sensors with New API670 Sensors & Monitoring Units

Running Successfully : 2018.



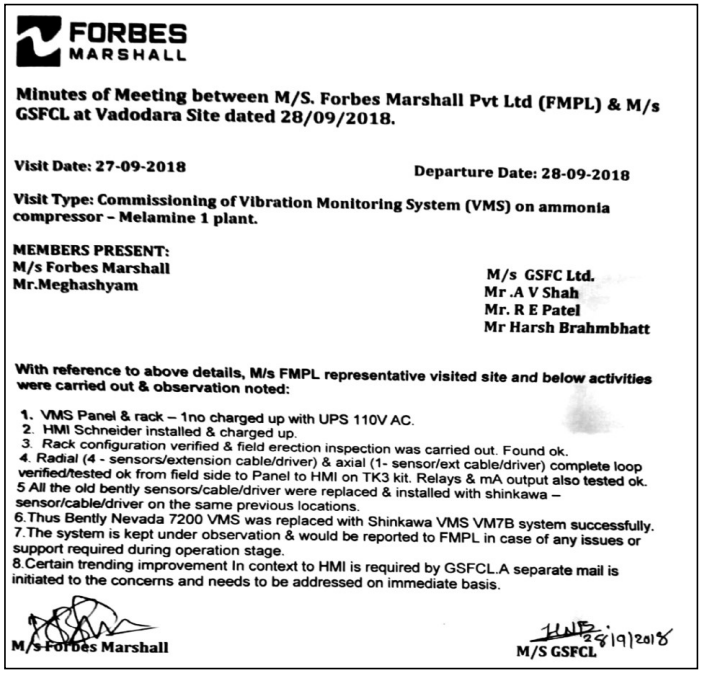
GUJARAT STATE FERTILIZERS & CHEMICALS LIMITED
P.O.FERTILIZERNAGAR- 391750 DIST: VADODARA.
Phone: 2242051, 2242451, 2242651, 2242751, 2242541
Fax: 0265-2240966, 0265-2240119, 2242746(PURCHASE)
EMAIL: ho@gsfcltd.com

Page 1 of 8
[F:70:307:0]

Version: 0 of 0

Purchase Order No.: 4110046844/8163
Date : 13.09.2022
Vendor Code 112216 GST NO:27AAACF2630E1Z5
Ms FORBES MARSHALL PVT LTD.
PLOT NO. B-85, PHASE -II
CHAKAN INDUSTRIAL AREA
VILLAGE : SAVARDARI - CHAKAN
TA : KHED, DIST. PUNE
PUNE - 410501
Maharashtra - India
ksheladiya@forbesmarshall.com
Phone:9825000717

Dear Madam/Sir,
We refer to your Offer No. 626 Dated 04.08.2022
against our Enquiry No. 6110015894
and are pleased to inform that we have accepted the rates offered by you.Please arrange to supply the goods shown here under strictly, according to the description and terms and conditions of our enquiry and this purchase order.



FORBES MARSHALL

Minutes of Meeting between M/S. Forbes Marshall Pvt Ltd (FMPL) & M/s GSFCL at Vadodara Site dated 28/09/2018.

Visit Date: 27-09-2018 **Departure Date: 28-09-2018**

Visit Type: Commissioning of Vibration Monitoring System (VMS) on ammonia compressor – Melamine 1 plant.

MEMBERS PRESENT:
M/s Forbes Marshall
Mr.Meghashyam

M/s GSFC Ltd.
Mr .A V Shah
Mr. R E Patel
Mr Harsh Brahmbhatt

With reference to above details, M/s FMPL representative visited site and below activities were carried out & observation noted:

1. VMS Panel & rack – 1no charged up with UPS 110V AC.
2. HMI Schneider installed & charged up.
3. Rack configuration verified & field erection inspection was carried out. Found ok.
4. Radial (4 - sensors/extension cable/driver) & axial (1- sensor/ext cable/driver) complete loop verified/tested ok from field side to Panel to HMI on TK3 kit. Relays & mA output also tested ok.
5 All the old bently sensors/cable/driver were replaced & installed with shinkawa – sensor/cable/driver on the same previous locations.
6.Thus Bently Nevada 7200 VMS was replaced with Shinkawa VMS VM7B system successfully.
7.The system is kept under observation & would be reported to FMPL in case of any issues or support required during operation stage.
8.Certain trending improvement In context to HMI is required by GSFCL.A separate mail is initiated to the concerns and needs to be addressed on immediate basis.

M/s Forbes Marshall

28/9/2018
M/S GSFCL

Ashuganj Ferti. Bangladesh

Replacement of around 12 old BN 7200/3300 racks

- Latest VM-7 series Racks
- Ammonia compressor,
- Air compressor,
- Synthesis compressor,
- Alternator –I & II ,
- Carbamide pumps
- CO2 compressor

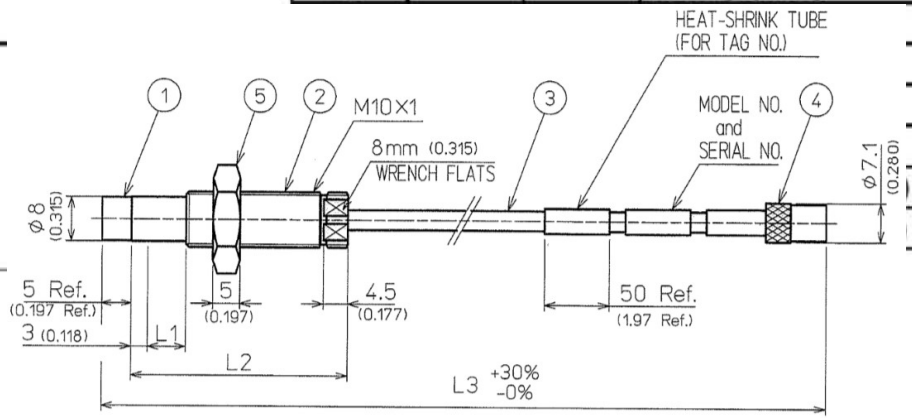
Eddy Current Probe System

- FL-202 : 2000 μm : 787 mV/100 μm
- FL-452 : 4500 μm : 3.94 mV/100 μm

FK-202F -	2		- 1		- 1		-		/	
	System cable length		Mounting plate		Terminal Block		Intrinsically safe		Geothermal spec.	
	1	5 Meter	1	DIN Rail(35mm) Mount	1	Screw type terminal block (M4)	1	TIIS (Ex ia IIC T4)	Geo	
	2	9 Meter	2	Screw mount (50.8×50.8mm)	2	Spring lock terminal	4	CSA C/US (Ex ia IIC T4)		
			3	Screw mount			5	ATEX (Ex ia IIC T4 Ga)		
				(92×31mm : For VK replacement)			7	NEPSI (Ex ia IIC T4)		
			4	Screw mount Multi-pitch			8	KTL (Ex ia IIC T4)		
				(50.8×50.8mm and 92×31mm)			B	TS (Ex ia IIC T4 Ga)		

Eddy Current Probe System

	Standard code				Additional code		Spec.
Model	FL-202F08A-M2	····	····	···	····	····	
Unthreaded length(L1)		00	····	···	····	····	0mm [Standard]
L1≦L2−20mm		01 to 23	····	···	····	····	10 to 230mm(10mm step) [Option]
Case length(L2)			02 to 05	···	····	····	20 to 50mm(10mm step) [Standard]
			06 to 25	···	····	····	60 to 250mm(10mm step) [Option]
Cable Length				05	····	····	0.5m [Standard]
				10	····	····	1.0m [Standard]
				20	····	····	2.0m [Option]
				50	····	····	5.0m [Option]
Intrinsic Safety							



API-670 Vibration Monitoring & Protection

Certificate Of Compliance

This is to certify that the:

Turbine Supervisory Instrument (VM-7B)

Model Number: VM-741B-2
VM-742B1-*-2 (*=1,3,4,5,6)
VM-742B2-*-2 (*=1,3,4,5,6)

Firmware Version: V.2.0.0.0

Category: Embedded Device

Manufactured by:

SHINKAWA Sensor Technology, Inc.

Is in compliance with the requirements set forth by:

Achilles Level II Certification

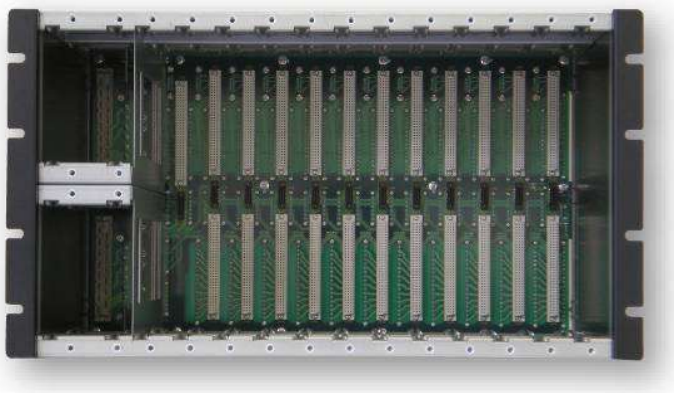
This certificate is restricted to the specified version of the referenced Device (including model number, hardware/firmware/software version, and control protocols) set forth in this Certificate. Any change to the Device might impair the Device's ability to pass the standards referenced in this Certificate. This Certificate is based upon limited testing, and is not a complete or comprehensive certification of the security of the Device. The Device may contain security vulnerabilities and deficiencies that are not covered by the standards referenced in this Certificate. This Certificate is subject to revocation by GE Digital or NRI SecureTechnologies, Ltd. More information regarding this Certificate and the Achilles Communications Certification Standard is available at www.ge.com/digital and upon request from GE Digital.

CERTIFICATE 393-012218
Awarded by NRI SecureTechnologies, Ltd.

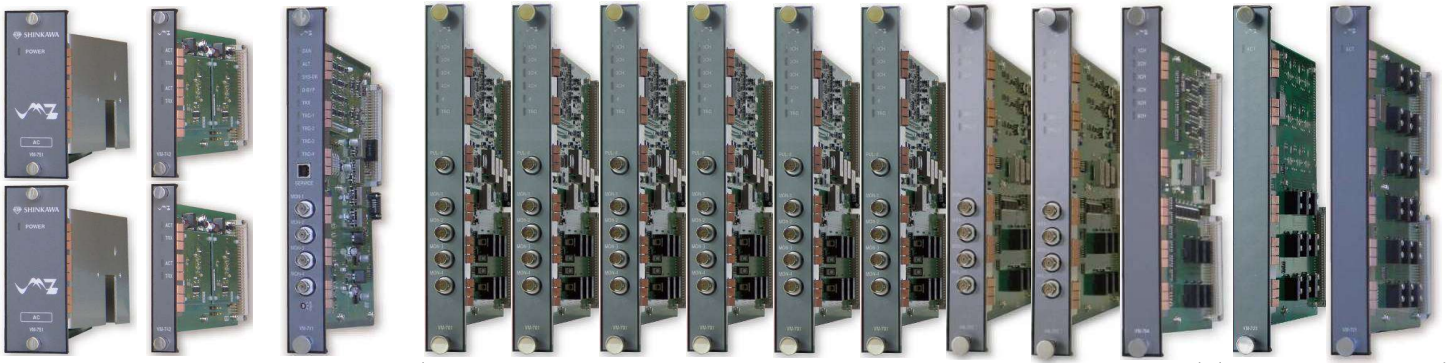
Jun Odashima
President & CEO
NRI SecureTechnologies

achilles

API-670 Vibration Monitoring & Protection



VM-76□B
19-inch
Instrument Rack



Power Supply Modules

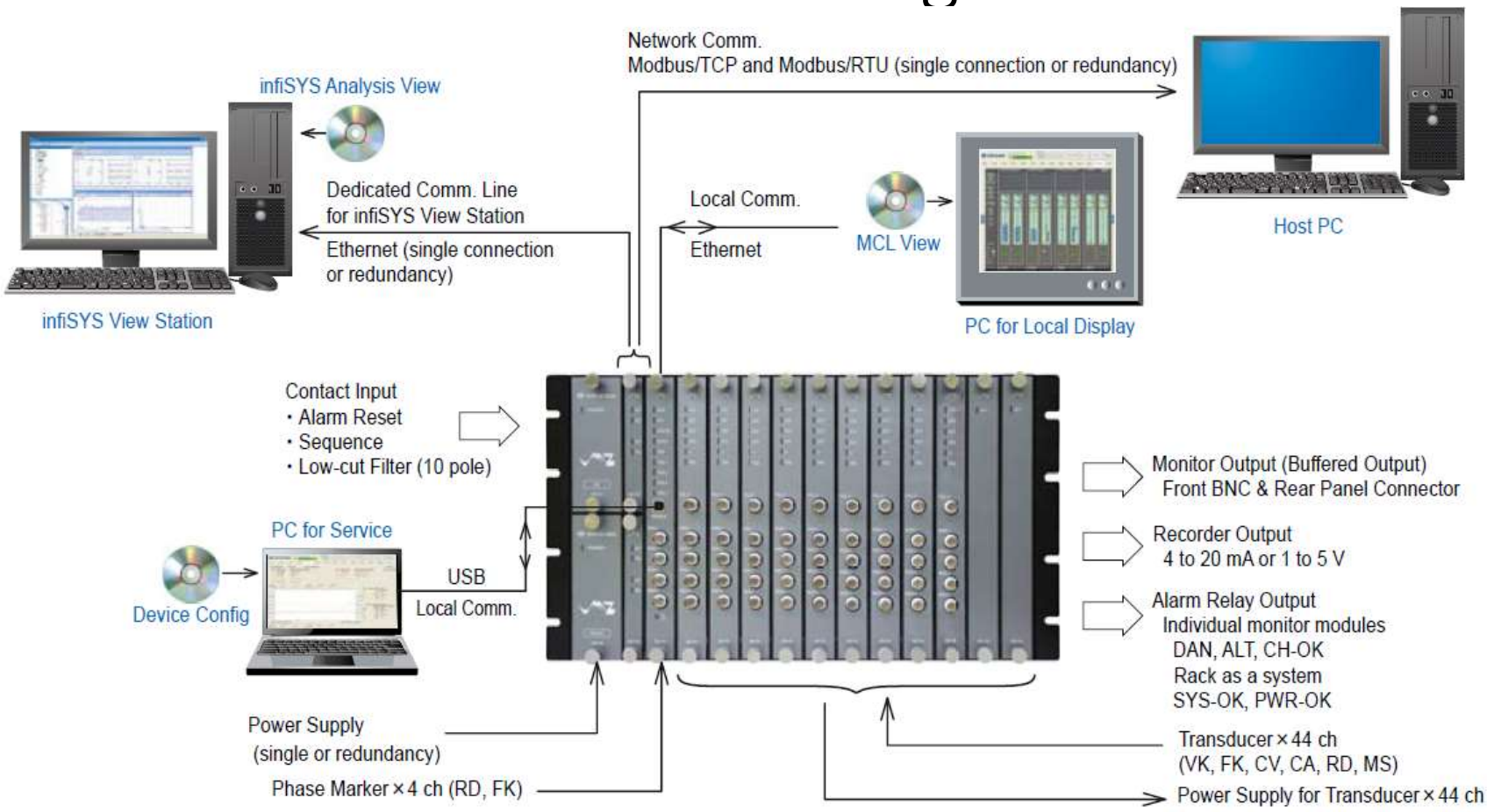
Network Comm. Modules

Local Comm. & Phase Marker Module

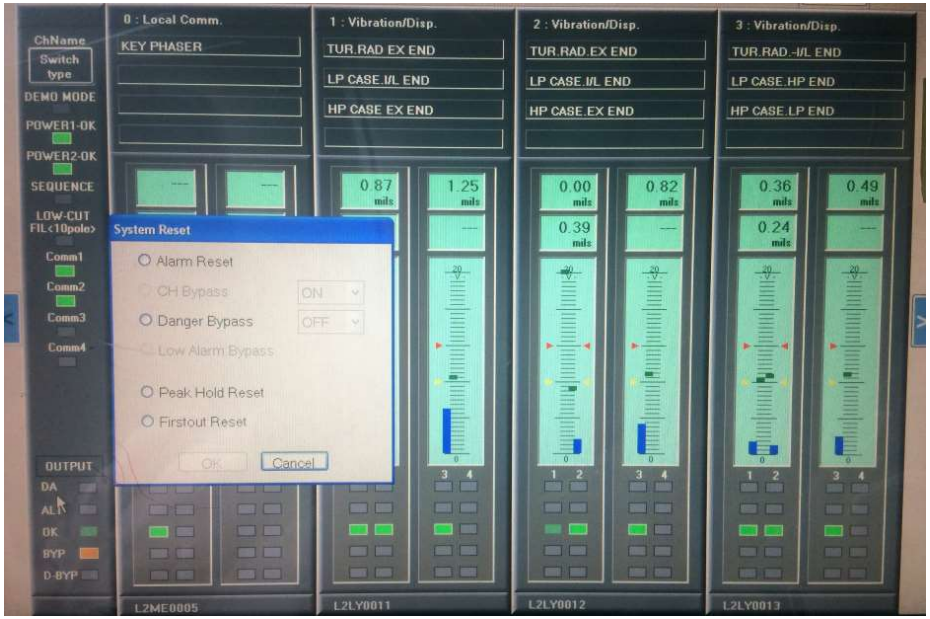
Monitor Modules

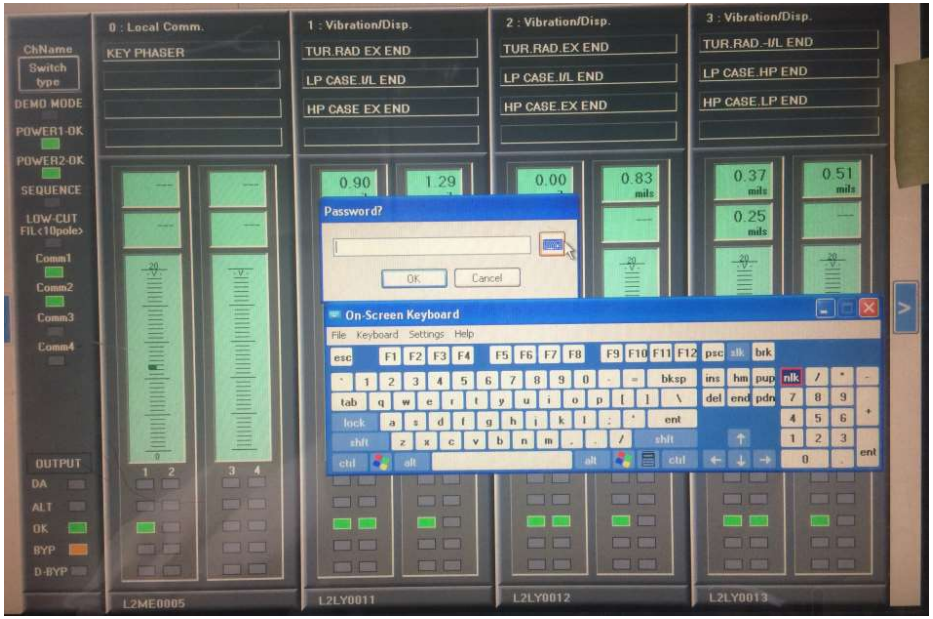
Relay Modules

API-670 Vibration Monitoring & Protection

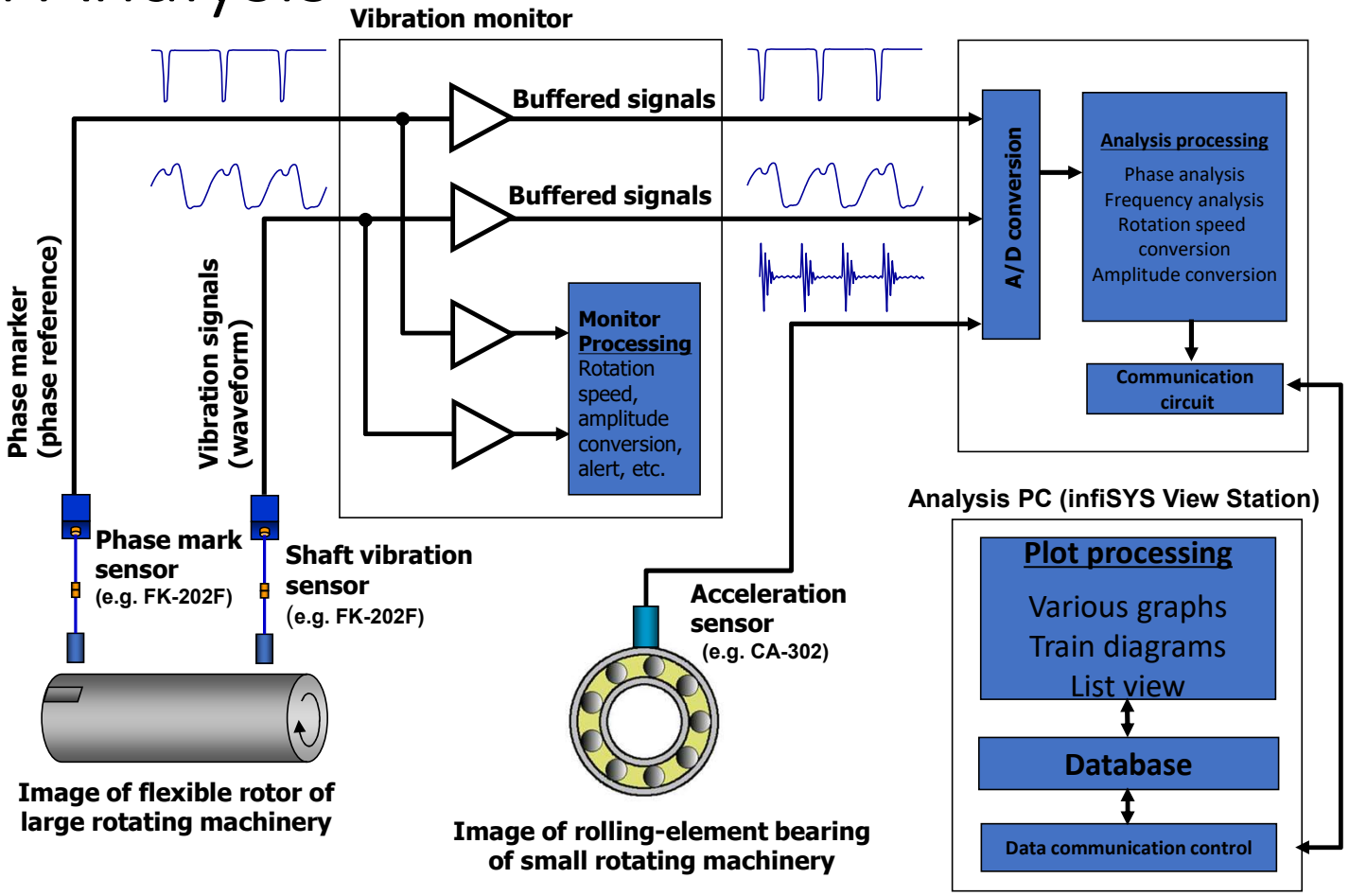


Channel Bypassing for special needs

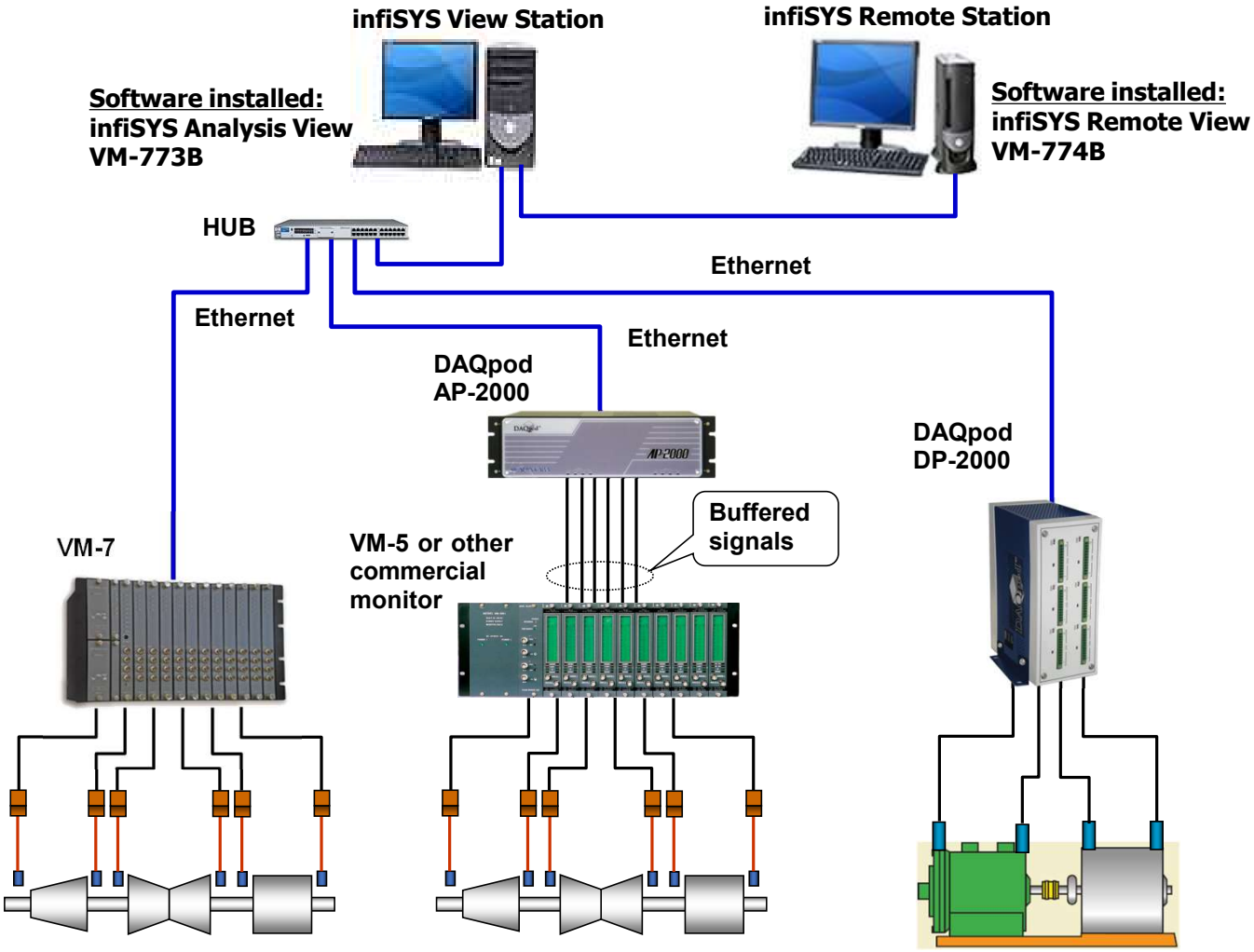




Vibration Analysis



All M/Cs


infiSYS View Station
Software installed:
infiSYS Analysis View
VM-773B
infiSYS Remote Station
Software installed:
infiSYS Remote View
VM-774B
HUB
Ethernet
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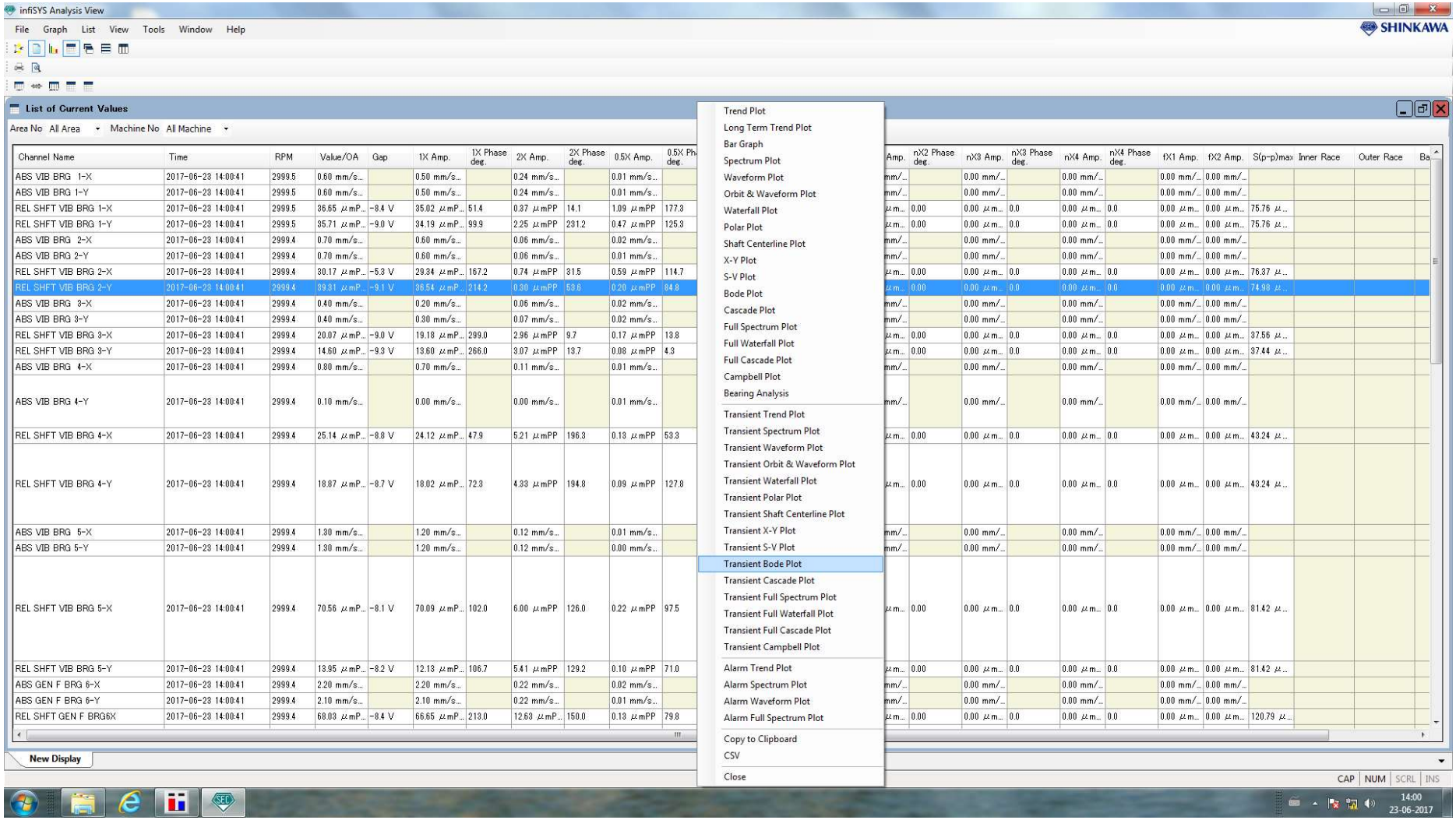
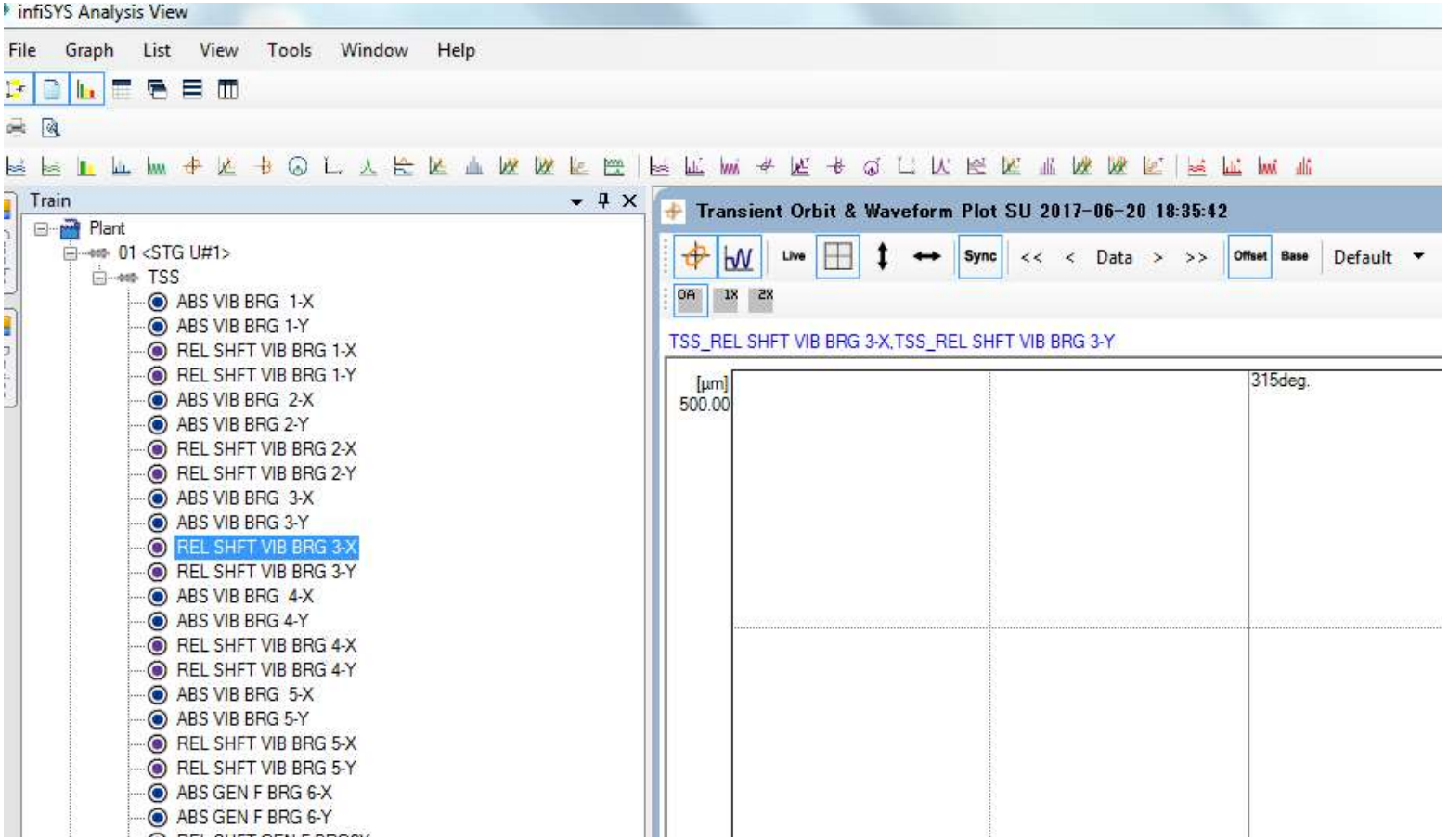
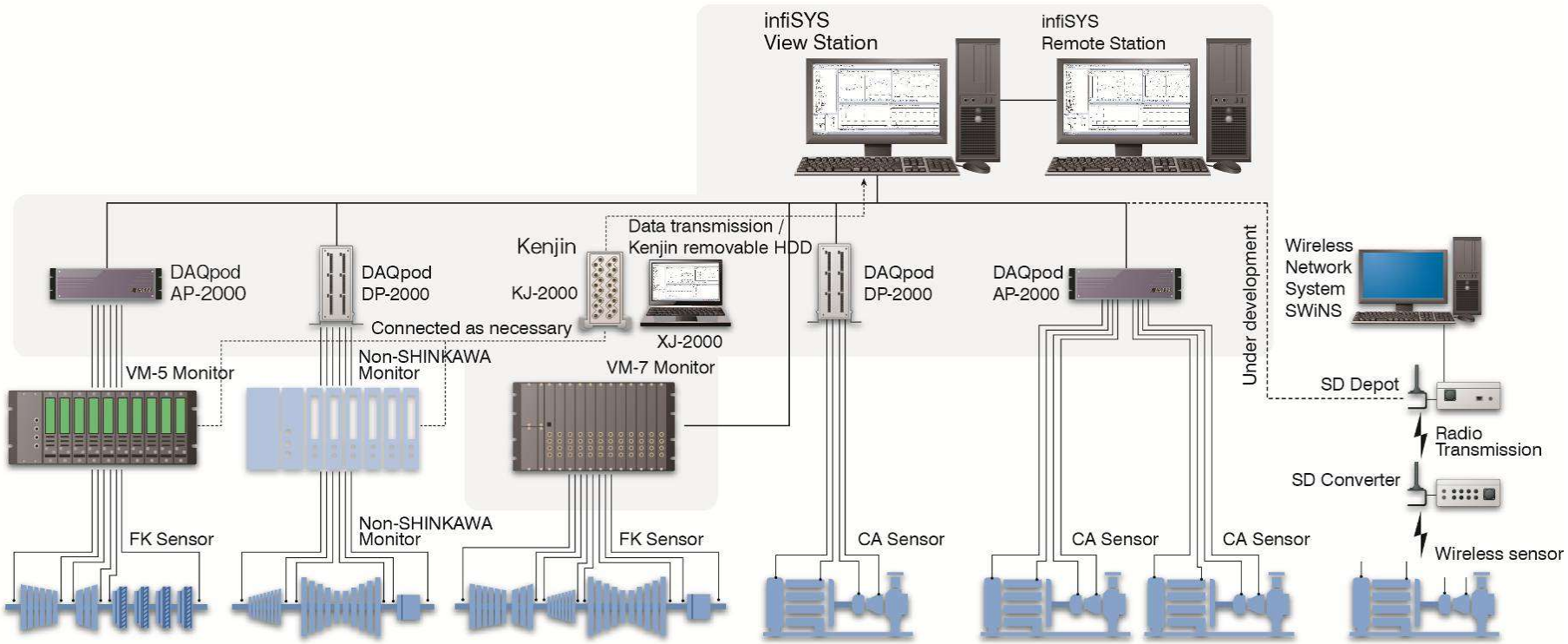
Ethernet
DAQpod
AP-2000
DAQpod
DP-2000
Buffered
signals
VM-7
VM-5 or other
commercial
monitor


infiSYS Analysis View
File Graph List View Tools Window Help
SHINKAWA
List of Current Values
Area No All Area
Machine No All Machine
Channel Name | Time | RPM | Value/OA | Gap | 1X Amp. | 1X Phase deg. | 2X Amp. | 2X Phase deg. | 0.5X Amp. | 0.5X Ph deg. | nX2 Phase deg. | nX3 Amp. | nX3 Phase deg. | nX4 Amp. | nX4 Phase deg. | fX1 Amp. | fX2 Amp. | S(p-p)max | Inner Race | Outer Race
ABS VIB BRG 1-X | 2017-06-23 14:00:41 | 2999.5 | 0.60 mm/s... | | 0.50 mm/s... | | 0.24 mm/s... | | 0.01 mm/s...
ABS VIB BRG 1-Y | 2017-06-23 14:00:41 | 2999.5 | 0.60 mm/s... | | 0.50 mm/s... | | 0.24 mm/s... | | 0.01 mm/s...
REL SHFT VIB BRG 1-X | 2017-06-23 14:00:41 | 2999.5 | 36.65 µmP... | -8.4 V | 35.02 µmP... | 51.4 | 0.37 µmPP | 14.1 | 1.09 µmPP | 177.3
REL SHFT VIB BRG 1-Y | 2017-06-23 14:00:41 | 2999.5 | 35.71 µmP... | -9.0 V | 34.19 µmP... | 99.9 | 2.25 µmPP | 231.2 | 0.47 µmPP | 125.3
ABS VIB BRG 2-X | 2017-06-23 14:00:41 | 2999.4 | 0.70 mm/s... | | 0.60 mm/s... | | 0.06 mm/s... | | 0.02 mm/s...
ABS VIB BRG 2-Y | 2017-06-23 14:00:41 | 2999.4 | 0.70 mm/s... | | 0.60 mm/s... | | 0.06 mm/s... | | 0.01 mm/s...
REL SHFT VIB BRG 2-X | 2017-06-23 14:00:41 | 2999.4 | 30.17 µmP... | -5.3 V | 29.34 µmP... | 167.2 | 0.74 µmPP | 31.5 | 0.59 µmPP | 114.7
REL SHFT VIB BRG 2-Y | 2017-06-23 14:00:41 | 2999.4 | 39.31 µmP... | -9.1 V | 36.54 µmP... | 214.2 | 0.30 µmPP | 59.6 | 0.20 µmPP | 84.8
ABS VIB BRG 3-X | 2017-06-23 14:00:41 | 2999.4 | 0.40 mm/s... | | 0.20 mm/s... | | 0.06 mm/s... | | 0.02 mm/s...
ABS VIB BRG 3-Y | 2017-06-23 14:00:41 | 2999.4 | 0.40 mm/s... | | 0.30 mm/s... | | 0.07 mm/s... | | 0.02 mm/s...
REL SHFT VIB BRG 3-X | 2017-06-23 14:00:41 | 2999.4 | 20.07 µmP... | -9.0 V | 19.18 µmP... | 299.0 | 2.96 µmPP | 9.7 | 0.17 µmPP | 13.8
REL SHFT VIB BRG 3-Y | 2017-06-23 14:00:41 | 2999.4 | 14.60 µmP... | -9.3 V | 13.60 µmP... | 266.0 | 3.07 µmPP | 13.7 | 0.08 µmPP | 4.3
ABS VIB BRG 4-X | 2017-06-23 14:00:41 | 2999.4 | 0.80 mm/s... | | 0.70 mm/s... | | 0.11 mm/s... | | 0.01 mm/s...
ABS VIB BRG 4-Y | 2017-06-23 14:00:41 | 2999.4 | 0.10 mm/s... | | 0.00 mm/s... | | 0.00 mm/s... | | 0.01 mm/s...
REL SHFT VIB BRG 4-X | 2017-06-23 14:00:41 | 2999.4 | 25.14 µmP... | -8.8 V | 24.12 µmP... | 47.9 | 5.21 µmPP | 196.3 | 0.13 µmPP | 53.3
REL SHFT VIB BRG 4-Y | 2017-06-23 14:00:41 | 2999.4 | 18.87 µmP... | -8.7 V | 18.02 µmP... | 72.3 | 4.33 µmPP | 194.8 | 0.09 µmPP | 127.8
ABS VIB BRG 5-X | 2017-06-23 14:00:41 | 2999.4 | 1.30 mm/s... | | 1.20 mm/s... | | 0.12 mm/s... | | 0.01 mm/s...
ABS VIB BRG 5-Y | 2017-06-23 14:00:41 | 2999.4 | 1.30 mm/s... | | 1.20 mm/s... | | 0.12 mm/s... | | 0.00 mm/s...
REL SHFT VIB BRG 5-X | 2017-06-23 14:00:41 | 2999.4 | 70.56 µmP... | -8.1 V | 70.09 µmP... | 102.0 | 6.00 µmPP | 126.0 | 0.22 µmPP | 97.5
REL SHFT VIB BRG 5-Y | 2017-06-23 14:00:41 | 2999.4 | 13.95 µmP... | -8.2 V | 12.13 µmP... | 106.7 | 5.41 µmPP | 129.2 | 0.10 µmPP | 71.0
ABS GEN F BRG 6-X | 2017-06-23 14:00:41 | 2999.4 | 2.20 mm/s... | | 2.20 mm/s... | | 0.22 mm/s... | | 0.02 mm/s...
ABS GEN F BRG 6-Y | 2017-06-23 14:00:41 | 2999.4 | 2.10 mm/s... | | 2.10 mm/s... | | 0.22 mm/s... | | 0.01 mm/s...
REL SHFT GEN F BRG6X | 2017-06-23 14:00:41 | 2999.4 | 68.03 µmP... | -8.4 V | 66.65 µmP... | 213.0 | 12.63 µmP... | 150.0 | 0.13 µmPP | 79.8
Trend Plot
Long Term Trend Plot
Bar Graph
Spectrum Plot
Waveform Plot
Orbit & Waveform Plot
Waterfall Plot
Polar Plot
Shaft Centerline Plot
X-Y Plot
S-V Plot
Bode Plot
Cascade Plot
Full Spectrum Plot
Full Waterfall Plot
Full Cascade Plot
Campbell Plot
Bearing Analysis
Transient Trend Plot
Transient Spectrum Plot
Transient Waveform Plot
Transient Orbit & Waveform Plot
Transient Waterfall Plot
Transient Polar Plot
Transient Shaft Centerline Plot
Transient X-Y Plot
Transient S-V Plot
Transient Bode Plot
Transient Cascade Plot
Transient Full Spectrum Plot
Transient Full Waterfall Plot
Transient Full Cascade Plot
Transient Campbell Plot
Alarm Trend Plot
Alarm Spectrum Plot
Alarm Waveform Plot
Alarm Full Spectrum Plot
Copy to Clipboard
CSV
Close
New Display
CAP NUM SCRL INS
14:00
23-06-2017

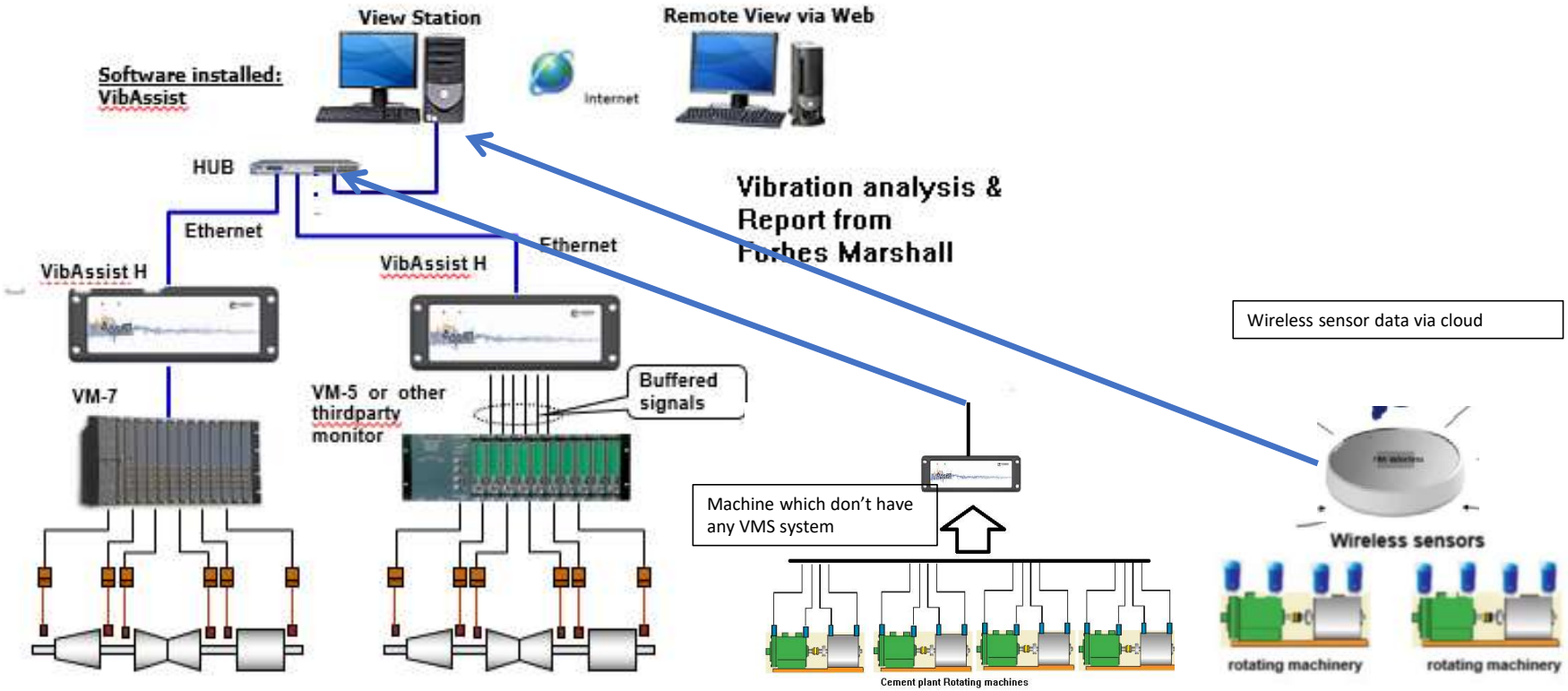
Drag and drop navigation



Plant wise remote analysis system

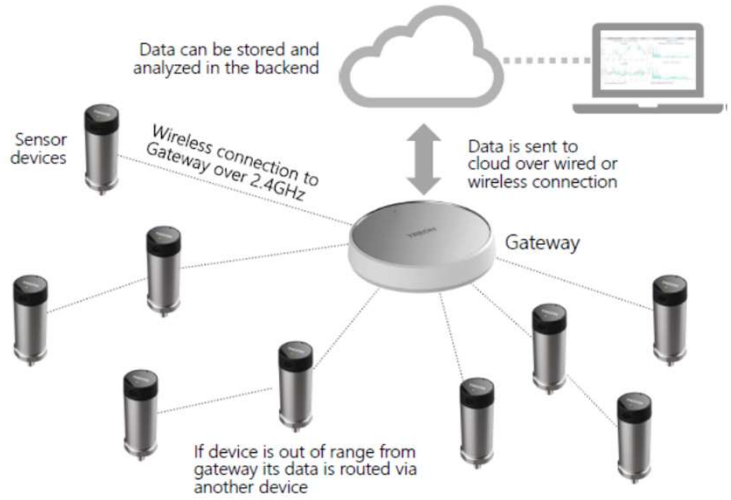


FM Vib Assist Vibration Analysis Software



Our Wireless Solution

- Wireless sensors
- Tri-Axial
- Wirepass based
- Gateway communicator
- Cloud based solution
- Common software for wired/wireless system



Our Wireless Solution

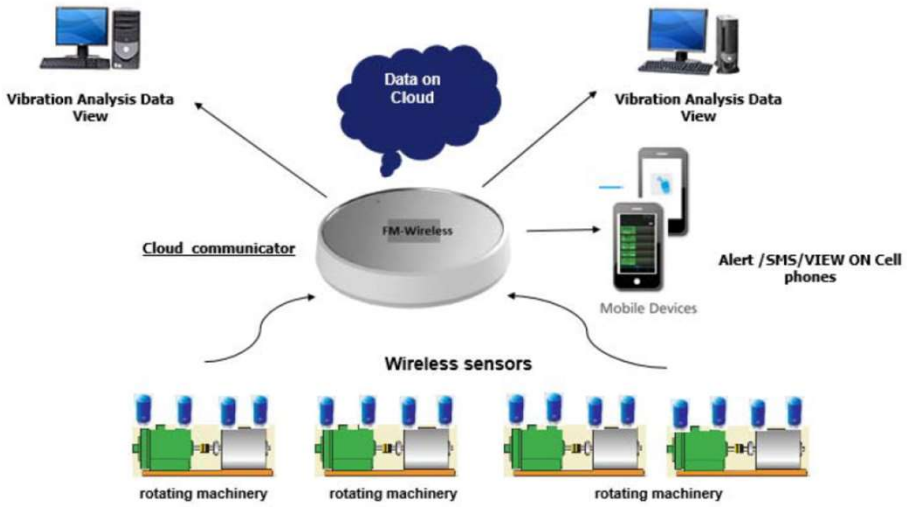
Tri-axial Sensor with Temperature measurement
Frequency range : up to 6.3kHz (+/-3dB)
Sampling rate : 26.6 KHz /16bit
Configurable full-scale : ±2/±4/±8/±16g

Temperature measurement : -40°C to +85 °C
Resolution: 0.1°C
Accuracy: +/- 2°C (mounting dependent)
Repeatability: +/- 0.1°C

Velocity: RMS, PEAK, P2P
Acceleration: RMS, PEAK, P2P, Kurtosis, Crest

Sample amount: 4096 max
Lines of resolution: 1600 lines max
Averages: configurable up to 9
Overlap: 0 to 100%
Windowing: optional Hanning

General schematic



Plus these too

- Rule Based Diagnostics
- Time Based Auto Diagnostics
- Training @ Our place for vibration analysis