



GET INTO THE WORLD OF
INDUSTRY 4.0
INTELLIGENT INSPECTION AND
MAINTENANCE IN 30 MINUTES



RENTITY
ARGUS

RENTITY ARGUS

AVALUE REAL-TIME GRASPING
UTILITY SOLUTION

An easier way to achieve high-performance maintenance & reliability

Solution features

Avalue digital transformation

Filling the gap between human and human
or human and machines



Proactive diagnosis notification

- FEMA indexing
- Proactive warning
- Accessible by any network device



Real time QC

Unnecessary to connect to PLC of machines, plug-and-play MES system



Intuitive interface

With a simple and clear interface which anyone can easily understand the diagnostic results, significantly lower the threshold for system use

- Avoid unexpected machine failures
- Reduce losses by up to 90%
- 30% reduction in costs from human resources
- Target to the root cause of the issue
- Spending least cost to achieve fast troubleshooting

IIoT Platform with IP66 Rating

Expert analysis module, a leader in the industry of intelligent diagnostic system

Main function

- Full-time monitoring, diagnosis and expectation capability
- Digital inspection and new voiceprint comparison system
- Enterprise level event handling
- Device maintenance record
- Unattended capability

Advantages of vibration diagnosis

Using the online diagnostic system to compare the trend of vibration and temperature of the same equipment, it can be seen that vibration can indicate the abnormality of the equipment earlier than temperature



Pain points



Problem analysis & troubleshooting

Once downtime & huge loss

Solving downtime & pain points of maintenance

Maintenance decisions & management fatigue

Idle waiting & wasting of time

Solution benefits

- Automated diagnostic and abnormal notification
- Reduce the human resources and unexpected down time
- Monitor the important devices remotely
- Quickly install and deploy within 30 minutes
- Equipment maintenance records
- Highly secure communication between ARGUS and Cloud



Notice

The user will immediately receive an exception notification, determining equipment status in advance through charts which can save risk costs when staff is insufficient and adverse equipment status



Virtual online expert

Detection of potential issue and risk, turning passive maintenance into proactive maintenance



Quick installing and model building

Integrating measurement, analysis, database and communication in one box



Inspection records & trend analysis

According to inspection record's big data to determine the root cause of failure modes



Digitization

Digitizing all task and data so that any situation can be quickly grasped and managed with systematic, holistic and historical records

To establish virtual diagnostic expert for each facility, who can convert data into events and also send notification

Steelmaking industry applications

Situations you may encounter



Sinter plant

Sintering pallet : Air leakage of sintering pallet

Mixing drum : Abnormal gear, track and support roller bearing

Big EP : Bent shaft, imbalance, eccentric and bearing damage



Blast furnace plant

Blast furnace : Abnormal main conveyor gearbox (gear, bearing), belt status



Converter plant

Ladle crane: Abnormal gearbox in ladle crane (gear, bearing)

ID FAN / FE FAN : Bent Shaft, imbalance, eccentric, bearing damage, abnormal coupling and surge



Slab plant

Steel rolling : Slip, torsional vibration, torsion fatigue, abnormal rolling and shaft clearance



Bar plant

Rolling mill : Abnormal gearbox in rolling mill (gear, bearing), torsional vibration, torsion fatigue, abnormal rolling and shaft clearance

Wire plant

Rolling mill and coiler : Abnormal gearbox (gear, bearing) and imbalance or eccentric



Hot rolling plant

Rough mill : Slip, torsional vibration, torsion fatigue, abnormal rolling and abnormal gearbox in edging mill (gear, bearing)

Finish mill : Slip, torsional vibration, torsion fatigue, abnormal rolling and abnormal gearbox in edging mill (gear, bearing)

Coiler : Abnormal gearbox (gear, bearing)



Cold rolling plant (pickling)

Box annealing furnace : Abnormal bearing, imbalance and misalignment

No.1 continuous annealing line : Abnormal gearbox in bed rolling mill (gear, bearing) and vibration mark of rolling mill



Cold rolling plant

Reciprocating cold rolling mill : Abnormal gearbox in rolling mill (gear, bearing), abnormal motor and shaft clearance

Architecture

Amplifying human ingenuity
with intelligent technology



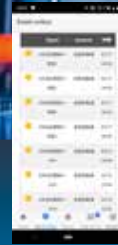
Equipment status



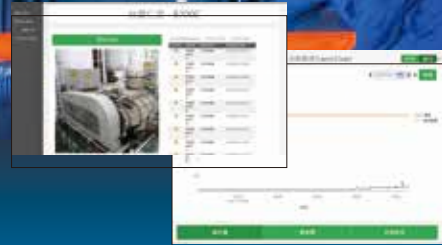
Inspection



Voiceprint detect



Event notification



Trend & maintenance management

Web/ APP Service

Microsoft
Azure

Third party
cloud service provider

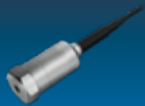


Renity ARGUS Sentinel 8/ Sentinel 3



Renity ARGUS Sentinel 3L

ARGUS IIoT platforms



Accelerometer



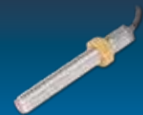
Microphone



Temperature sensor



Torque sensor

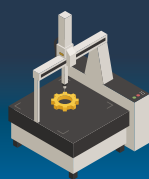


Rotational speed sensor

Sensors



Cutting tool



Drilling tool



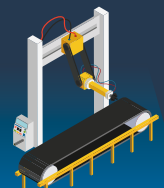
Compressor



Water pump



Windmill



Belt drive

Equipments

Renity ARGUS Sentinel specification

Model name	Renity-ARGUS Sentinel 8/ Sentinel 3	Renity-ARGUS Sentinel 3L
IP rating	IP66	-
Processor	Intel Atom® E3845	Intel Atom® E3845
DAQ	8 Channels (12.8ks/S)/ 3 Channels (12.8ks/S)	3 Channels (12.8ks/S)
DI / DO	4 DI/4 DO	-
Wireless communication	4G LTE / Wi-Fi	Wi-Fi
I/O port	1 x GbE, 1 x USB 3.0, 1 x VGA, 1 x RS-485	1 x USB 3.0, 1 x USB 2.0, 1 x VGA, 1 x HDMI, 1 x RS-232
Dimension	239.4 x 450 x 60 mm	285 x 239.4 x 60 mm
Operating temperature	-40°C ~ 60°C	0°C ~ 60°C

More industries



General

- Fixed RPM vibration diagnosis
- Variable RPM vibration diagnosis
- Fixed & Variable RPM voice diagnosis



Petrochemistry & plastics

- Reciprocating compressor diagnosis
- Rotary screw compressor diagnosis
- Freezer diagnosis
- Granulator diagnosis



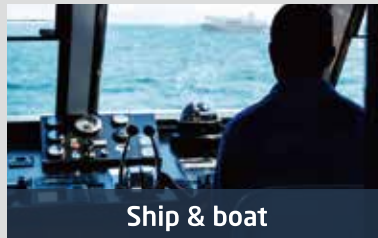
Steel & paper

- Rough rolling mill diagnosis
- Finishing rolling mill diagnosis
- Rapid mill diagnosis
- Roll marks of rolling mill diagnosis
- Roll marks & grinding of rolling diagnosis
- Drilling tool diagnosis



Manufacturing & tooling

- Cutting tool diagnosis
- Saw blade diagnosis
- Drilling tool diagnosis



Ship & boat

- Reciprocating compressor diagnosis
- Spiral compressor diagnosis
- Main gearbox diagnosis
- Diesel engine / Generator diagnosis
- Transmission shaft diagnosis

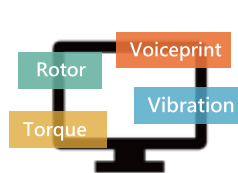
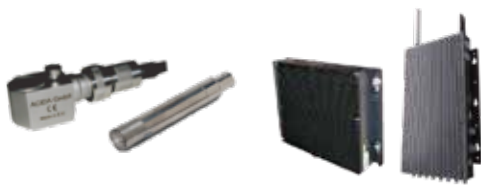


Others

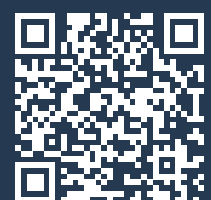
- ID Fan diagnosis
- Water pump diagnosis
- Windpump diagnosis
- Abnormal sound of belt diagnosis

Quick installation guide

- 1 Choose sensor
- 2 Choose platform and analysis module
- 3 Equipped with IoT platform
- 4 Install the sensor to the equipment
- 5 Download APP, Web accessibility



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