



# RONDS IWMS

RONDS Intelligent Wireless Monitoring System

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## **Intelligent Wireless Machinery Condition Monitoring Solution**

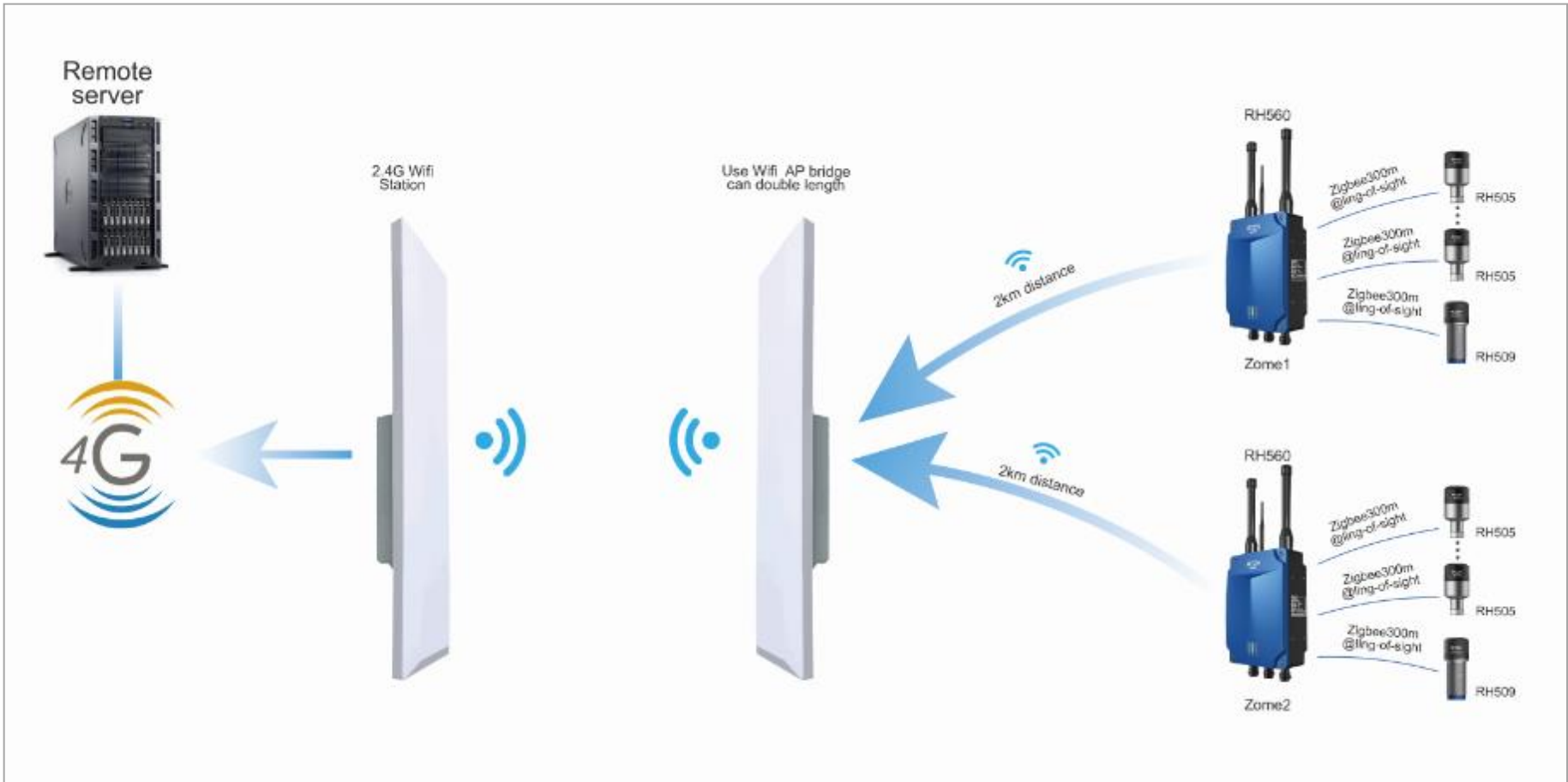


# Entirely Wireless Condition Monitoring System Topology





# Wireless solution 2



# Wireless solution 3



## ➤ **Intelligent data acquisition and processing**

With IWMS and pre-set DAQ strategy, complete data acquisition, processing and transmission of machines' vibration signal (acceleration, velocity and displacement) and temperature signal, achieve unmanned monitoring, and ensure machine safety and continuous running

## ➤ **Synchronous acquisition and analysis of temperature and vibration data**

RONDS IWMS synchronously collects temperature and vibration signal, it increases machine safety through dual monitoring of vibration and temperature data.



## ➤ **Intelligent alarm for abnormal machines**

Adopting various kinds of alarm parameters: overall value, index(available in Synchronous version), temperature, etc., ensure the accuracy and timeliness of alarm information

## ➤ **Convenient installation**

RONDS IWMS has no signal cable during installation, 2 years battery life of wireless accelerometer, secure installation of accelerometer with magnet base and M6 bolt. Satisfy the requirement of explosion proof degree on site

- **Four in one sensor--vibration and temperature integrated sensor**

Integrated design, synchronous collection of acceleration, velocity and displacement and temperature

- **One key upgrade of hardware and software**

One key remote upgrade, system upgrade is quick, accurate, efficient and convenient.

# RH505 Wireless vibration and Temperature integrated sensor



Internally acceleration and temperature sensor, collect velocity, acceleration, displacement and temperature signals simultaneously. The vibration signal can be displayed as spectrum waveform in software.

Zigbee communication, for on site use specially, strong antijamming capability, 300 meters transmission.

Φ42mm\*h65mm , small volume, easy to fix and maintain.

Low battery consumption design, collect data by every two hours, sustainable work for 2 years or longer.

Intelligent self-inspect function, warning for abnormal any time, saved time to check on site.

ExiaⅡCT4 , can be sued in 0 area,IP67,waterproof, dustproof.

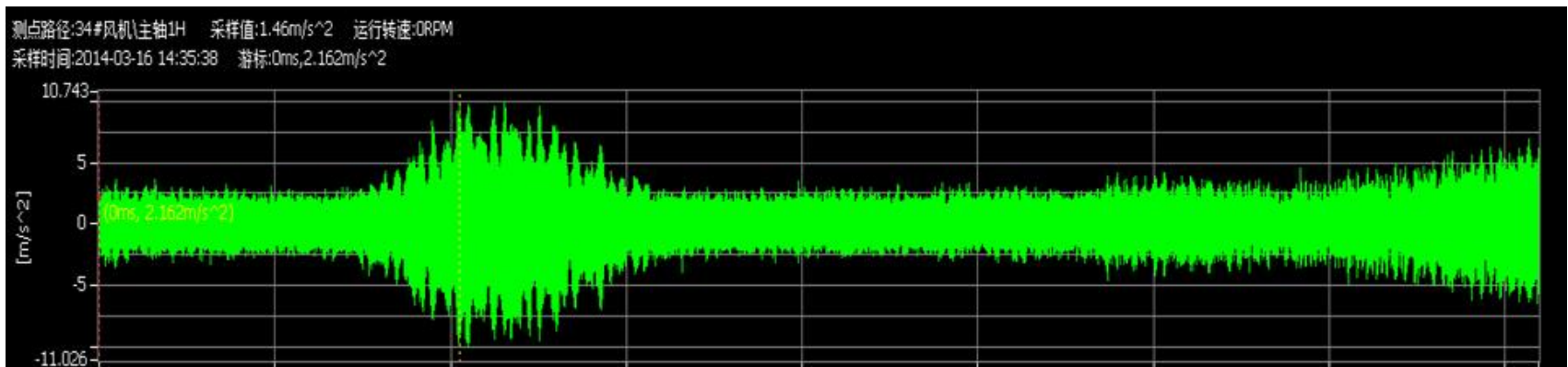
# RH505 Wireless speed sensor



<b>RH509 Wireless Speed Sensor</b>	
<b>Performance Parameter</b>	
Speed Measurement Range	60~6000 RPM
Speed Measurement Accuracy	±0.5 RPM
Response Distance	0-15 mm
<b>Electrical and Structure Parameter</b>	
Power Supply	Lithium - thionyl chloride battery, 3.6V 2.4Ah
Sensor Type	Eddy current
Communication Method	2.4GHz IEEE 802.15.4
Transmission Distance	300 Meters (No signal interference, no barrier)
Dimension	37 mm * 94mm (Diameter * Height)
Weight	85g
Mounting	Fixation through holder
<b>Environment Parameter</b>	
Working Temperature	-40~70 °C
IP degree	IP67
Explosion Proof Degree	ExiaIICT4 (Be suitable for Zone 0, Zone 1 and Zone 2)

## ➤ Long time waveform

RH505 supports the collection of long time waveform, maximal 512K (if analysis frequency is 20KHz, it can measure data of 10.24second). It can capture the whole signal of fault



# Wireless data collector



- Battery or 220v external power supply.
- 3G/4G, optical or network data transmission.
- Zigbee wireless data receiving, can receive data from 60 wireless vibration sensors and 4 wireless speed sensors.
- Anti-explosion design(ExdIICT4), suitable for ZONE 0, ZONE 1 and ZONE 2

# Wireless data collector



- Communication type: Communication with RH505 and RH509:Zigbee
- Communication with server, use any of the following type:
  - (1) Wired Ethernet
  - (2) Optical fiber
  - (3) 3G/4G
- Wireless communication frequency: 2.4GHz
- Wired communication tpye: Ethernet v2.0. IEEE802.3, TCP/IP, 10/100baseT
- Dimensions: 200×160×50mm
- Power supply: 3.6V Lithium Battery or 220VAC
- Weight: 3 kgs
- Storage capacity: 1GB
- Working temperature (-35~70) °C
- Anti-explosion options
- Anti-explosion indentification: ExdIICT4 Used for ZONE 0, ZONE 1, ZONE 2

# MOS3000 Online Monitoring System



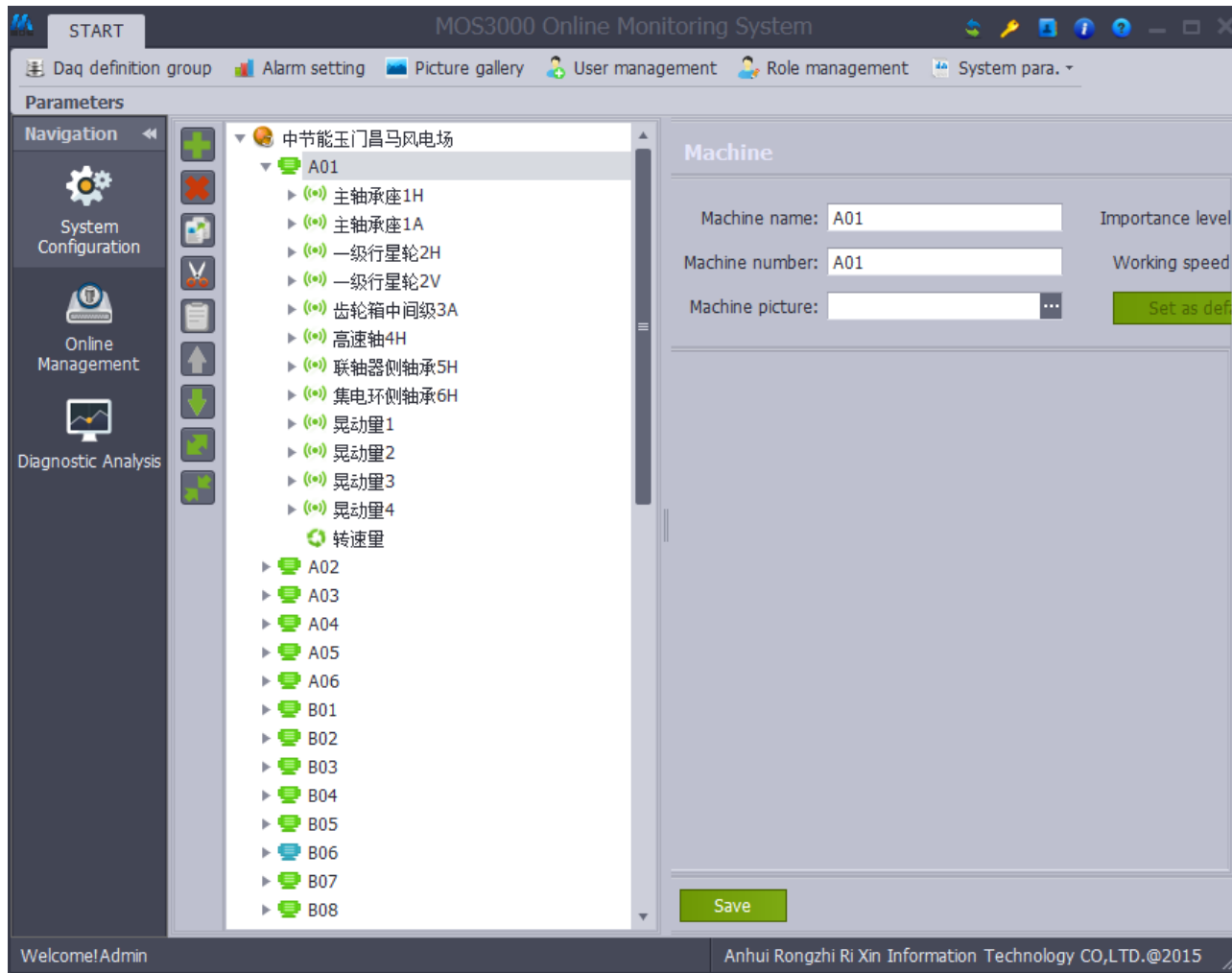
- MOS3000 automatically stores the data of vibration and temperature, and provides data analysis tools for uses.
- Clear interface. Users can easily switch the windows between data viewing and data analysis.





1. Webpage, can view machine condition anytime, anywhere.

# MOS3000--Tree Structure



2. Tree structure, Easy to check by administrators

# MOS3000 -- SMS/Email Alarm



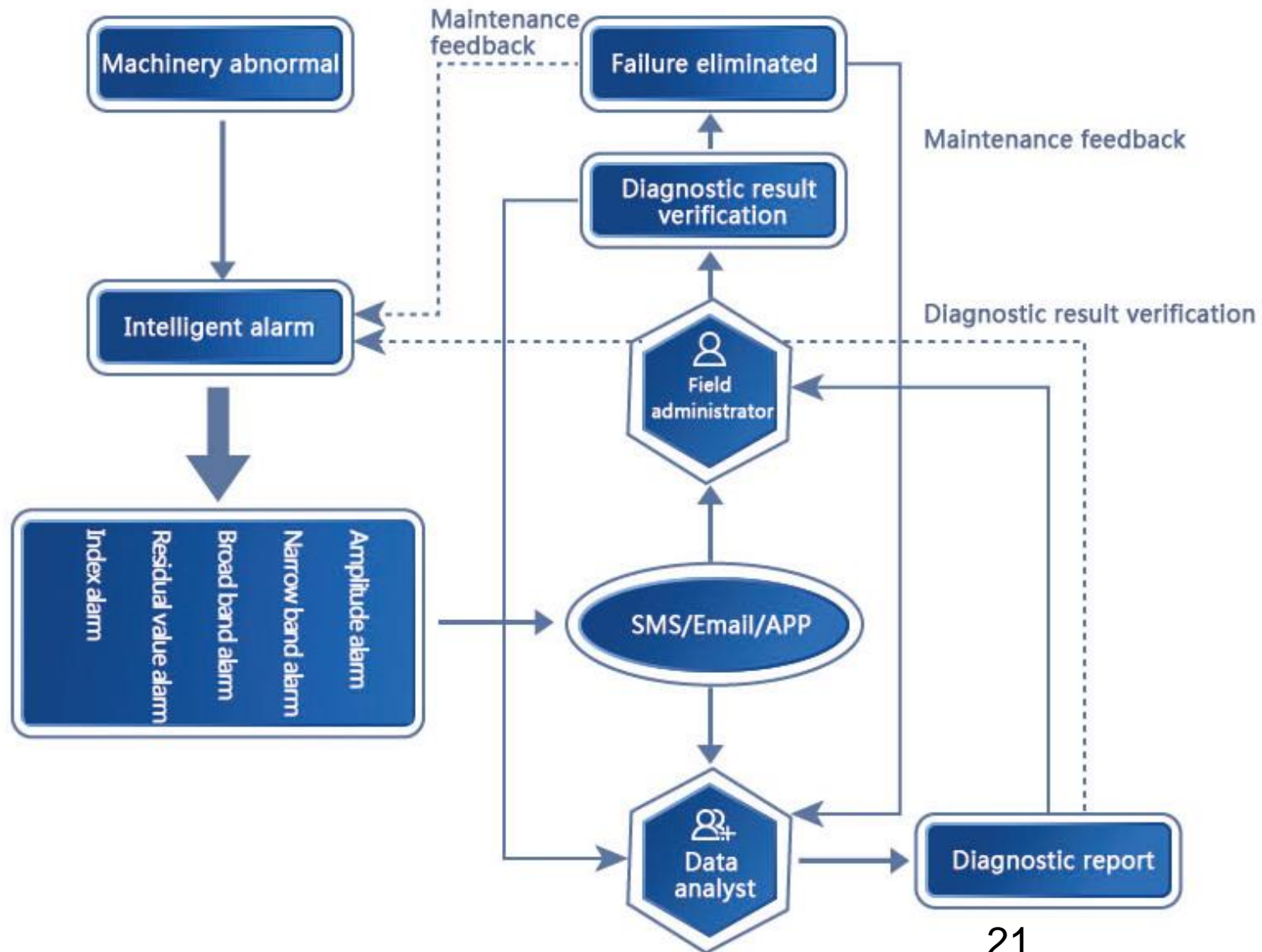
3. SMS/Email A, learn condition anywhere

# Intelligent Machinery Condition Monitoring Solution



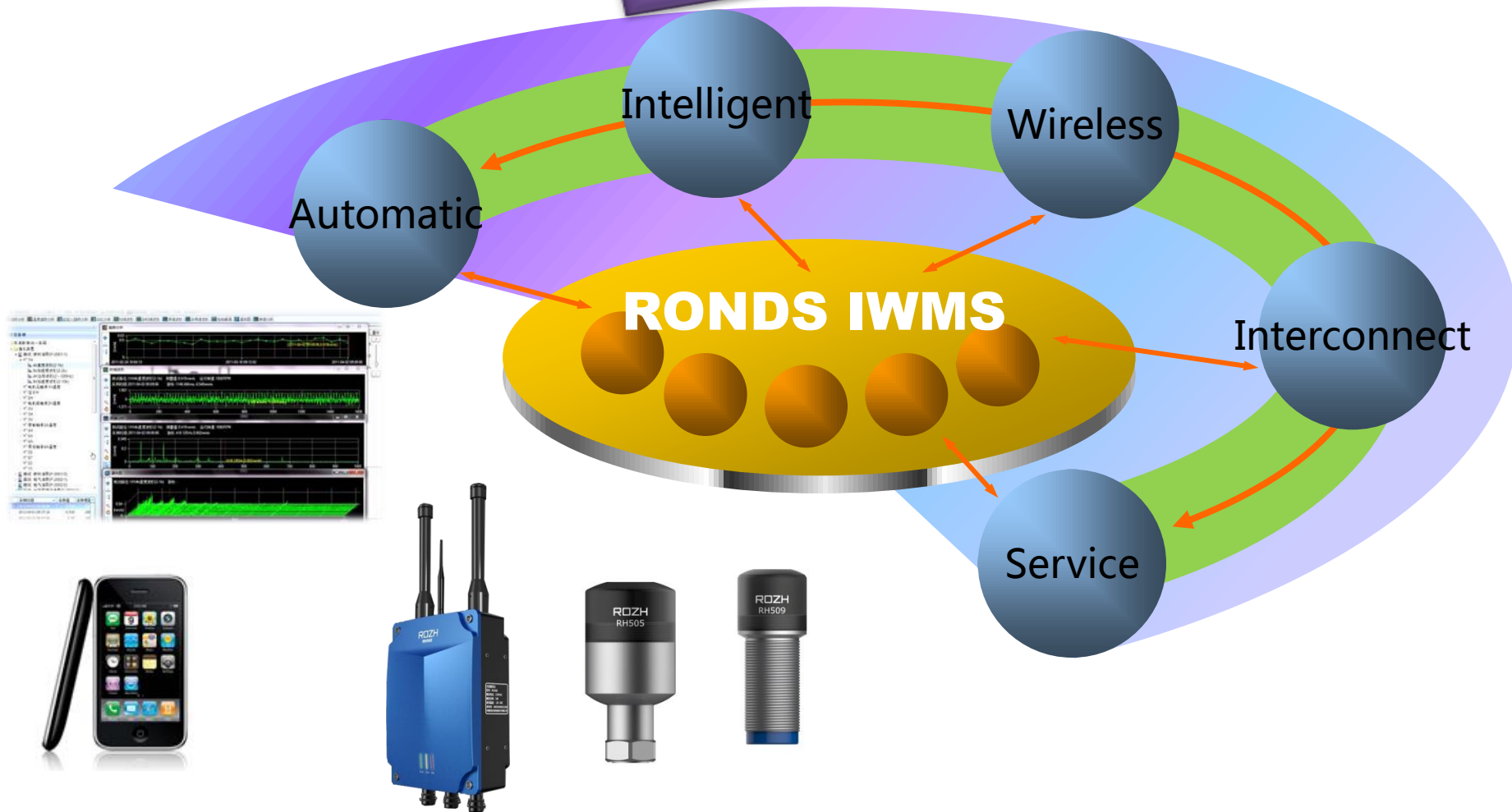
MOS3000	System setting	Statistical information	
		Log management	
		Machine configuration	
		User authority	
	Self-diagnosis	Identify network abnormal	
		Identify collection station abnormal	
		Identify sensor abnormal	
		Generate fault components frequency	
	Report	Different reports	
		Diagnosis report	
		Inspection report	
	Index analysis	Margin	Frequency band energy
		Pulse	Average value
		Peak	Minimum value
		Crooked	Maximal value
		Kurtosis	Rad. amplitude
	Condition analysis	Long time waveform	Envelope
		Multi spectrum trend	Cepstrum
		Multi time waveform	Channel temperature trend
		Trend	Speed waveform
		Spectrum	Waterfall
		Time waveform	
	Condition monitoring	Browse alarm information	
Browse machine detailed condition			
Operation condition monitoring			

# Intelligent alarm and response system



# IWMS Advantages

Condition monitoring based predictive maintenance.





# RONDS Introduction



## Who are we?

### ➤ Where are we?

RONDS was first founded in Shanghai in 2004, moved to Hefei in 2007, 11 years history.

### ➤ What we have?


RONDS product line contains accelerometers, portable vibration analyzers, and online condition monitoring system. With these products, we can provide complete machine condition monitoring solution for different industries.

### ➤ Who we serve?

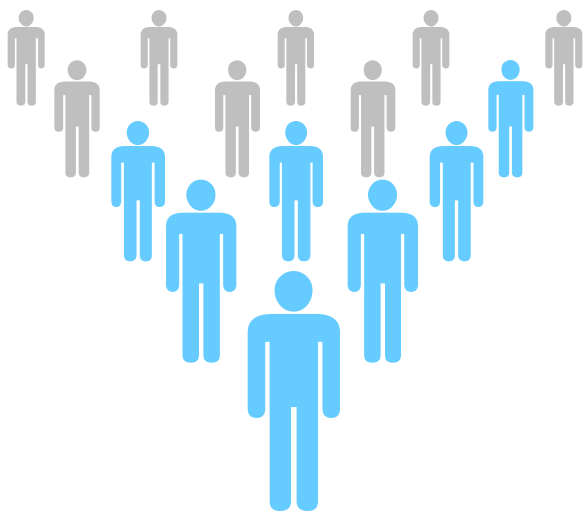
Our machine monitoring solutions have been widely applied in :  
wind energy; petroleum & chemical industry; steel, mining, cement, power plant, paper making....

### ➤ Where we sell?

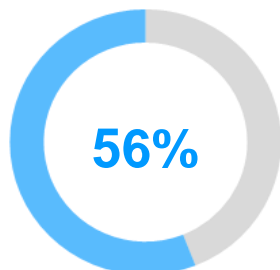
RONDS business has already covered more than 25 countries, and had strong distributors in Brazil, Mexico, Chile, Australia, Singapore, UK etc.

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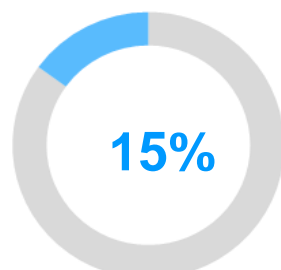




More than 200 employees



R&D team employees



R&D funds

➤ Professional data diagnostic service insurance:

- 20 professional data diagnostic engineers
- 9 members of intelligence algorithm and big data team

**Sensor technology----Data collection technology----  
Analysis software development----Big data, intelligent  
alarm algorithm----Remote Diagnosis Center.**

**Certification of CE, CGC and GL etc.**

**Complete technology chain development ability**



# 3 Remote Diagnosis Center



# Remote Diagnosis Center



The fault diagnosis experts will analyze the origin of mechanical fault, predict the component lifecycle, providing guide for machinery maintenance staff.

Based on experiences accumulation, and together with the research of fault characteristics, we are endeavoring to realize automatic intelligent diagnosis of system.



# Remote Diagnosis Center



# Remote Diagnosis Center



## Remote Diagnosis Center

Successful diagnosis cases are more than 500.

Collected more than 100 fault components, each component has a real case and complete fault circle signal



# Remote Diagnosis Center



**Bearing cases**



# Remote Diagnosis Center



Bearing cases



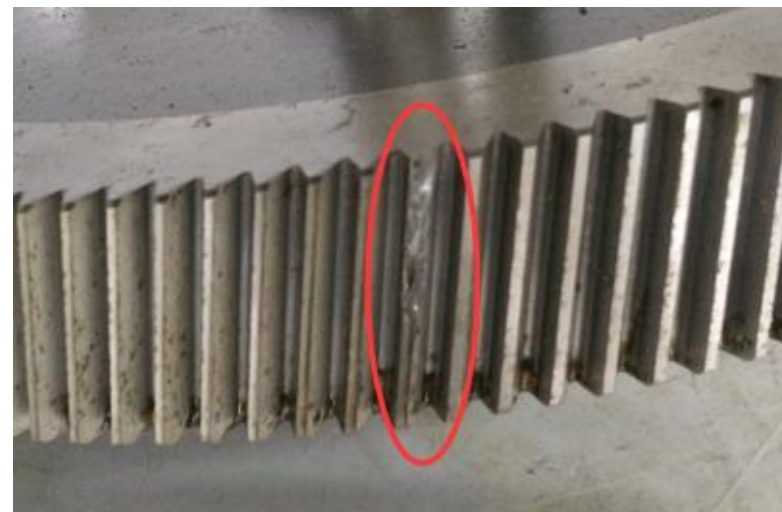


# Remote Diagnosis Center



**Gear teeth broken**





**Gear teeth broken**



# Remote Diagnosis Center



Bearing cage broken

# Remote Diagnosis Center



The background is a solid blue color with large, abstract, lighter blue swirls and curves that create a sense of movement and depth. The word "THANKS" is centered in the middle of the image.

**THANKS**