Proactive maintenance to mitigate unplanned downtime and rising cost challenges in the metal industry

Condition monitoring as proactive asset management strategy in metal manufacturing

Bently Nevada
a Baker Hughes business

Reactive maintenance is expensive

60–70%
of all equipment malfunctions in metal plants occur due to improper maintenance.

60%
of total downtime is unplanned downtime which escalates costs and consequences, creating profit and production losses.

$500,000 USD
per day estimated losses from unplanned downtime.

Proactive maintenance can help

5% increase in availability of critical equipment by using proactive maintenance systems.

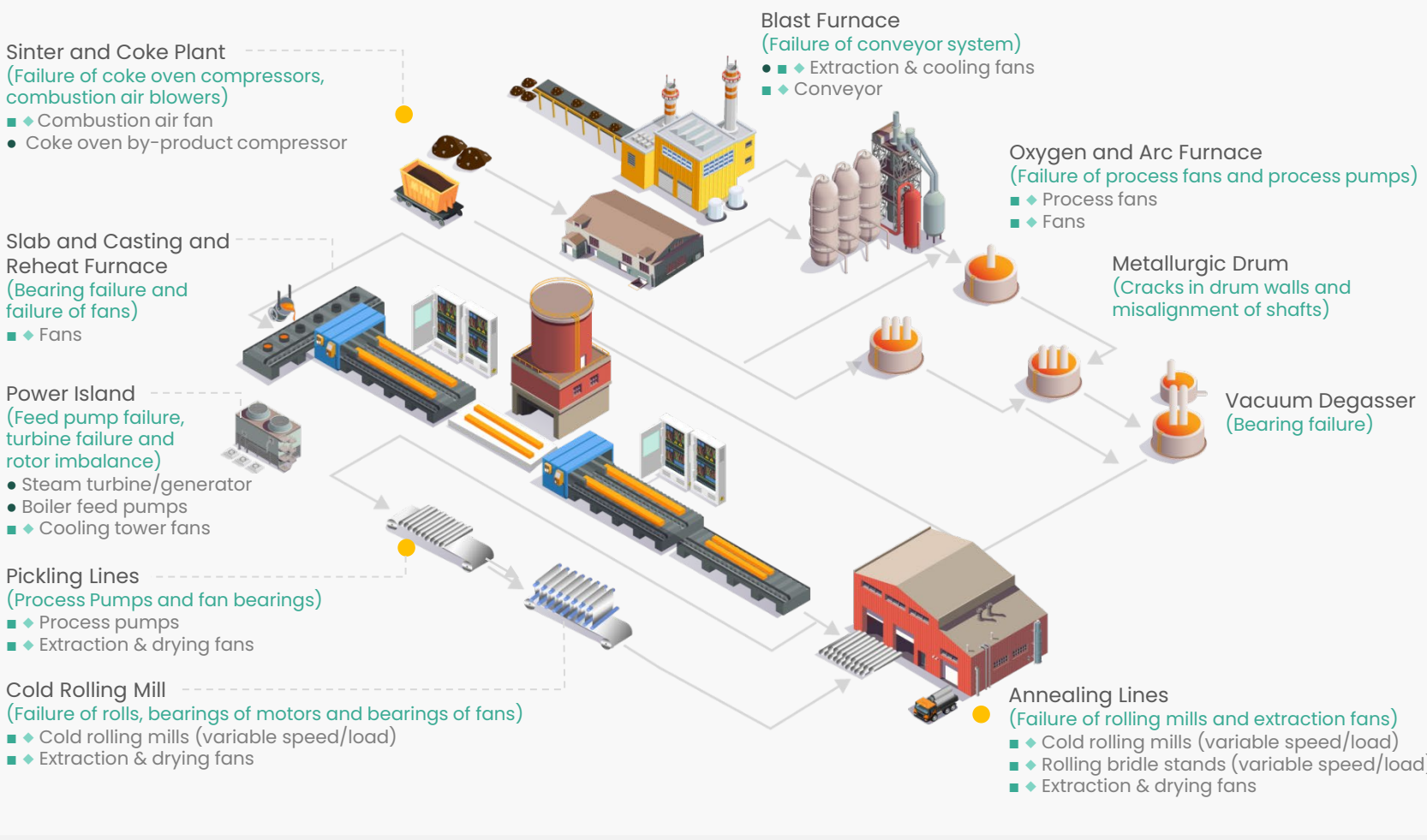
3–4 Months advance prediction of potential failures, allowing for timely and cost-effective maintenance.

Triggers to install Condition Monitoring (CM) systems for proactive maintenance

Unplanned Downtime	45%	Maintenance Cost	25%
Product Quality	20%	Increased Equipment Life	10%

% of Respondents

Major operational risks in metal manufacturing



● *Critical Nodes: Sinter and coke plants, pickling lines, cold rolling mills, annealing lines, and hot strip mills are critical machinery.*

Bently Nevada's solutions

● Condition monitoring and protection

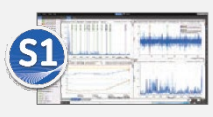
Orbit 60 | 3500 Series | 2300 | ADAPT 3701/40 | 1900/65A | AnomAlert

■ Condition monitoring

vbOnline Pro and Ranger Pro

◆ Portable data collection

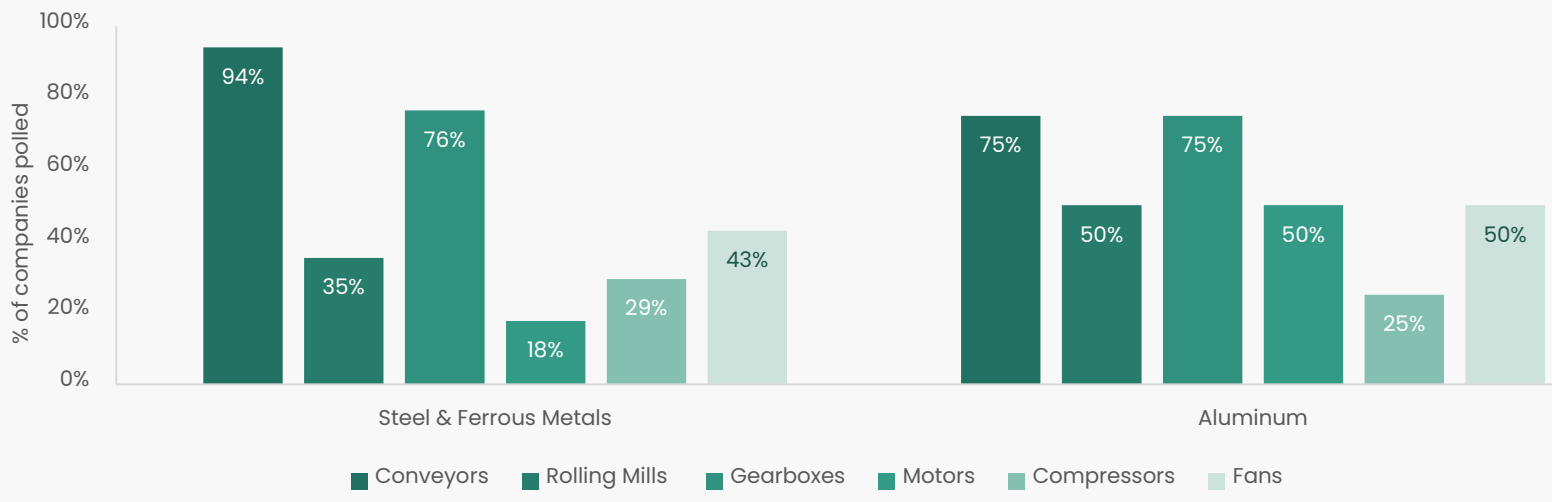
SCOUT100, vbx series, and COMMTEST/SCOUT220/240



System 1—one platform, endless possibilities Improve equipment reliability, uptime and efficiency

System 1 represents Bently Nevada's flagship condition monitoring solution that seamlessly integrates with our industry leading products including online and portable devices. System 1 provides scalability by adapting to the condition monitoring requirements at your facility, as well as flexibility by connecting to any Bently Nevada's field devices.

Metal manufacturing assets with high frequency of failure



Additional challenges

- Frequency and complexity of maintenance issues
- Unavailability of special tools and expertise on-site
- Skill loss via high retirement rates
- Longer and more frequent production delays from more callouts to external service companies

Achieve productivity goals with Bently Nevada's products and services that provide

- A modular condition monitoring and evaluation system that supports up to 12 dynamic vibration and/or pressure sensors, along with up to three pulse-based machine speed sensors
- Portable size and shape for mounting locally on the machinery that it would be monitoring, eliminating the need for long sensor cable runs to centralized rack-based systems
- Real-time data collection across all active channels
- Event data recorder for smarter data collection

Benefits of using AI/ML-embedded CM Systems

AI/ML

15–20% increase in efficiency and optimized production processes

~65% have actively implemented*

Condition based monitoring

18% increase in gross profit and savings of up to USD 2 million have been achieved by early adopters

~35% are interested in implementing* for proactive remote support

IIoT

*Based on survey of major metal manufacturers

Incorporation of AI/ML

As those in metals manufacturing focus on advancing proactive asset reliability, Bently Nevada can assist to reduce maintenance cost, improve profitability and establish enterprise-wide reliability.

Please contact us at
Bently.com

Baker Hughes