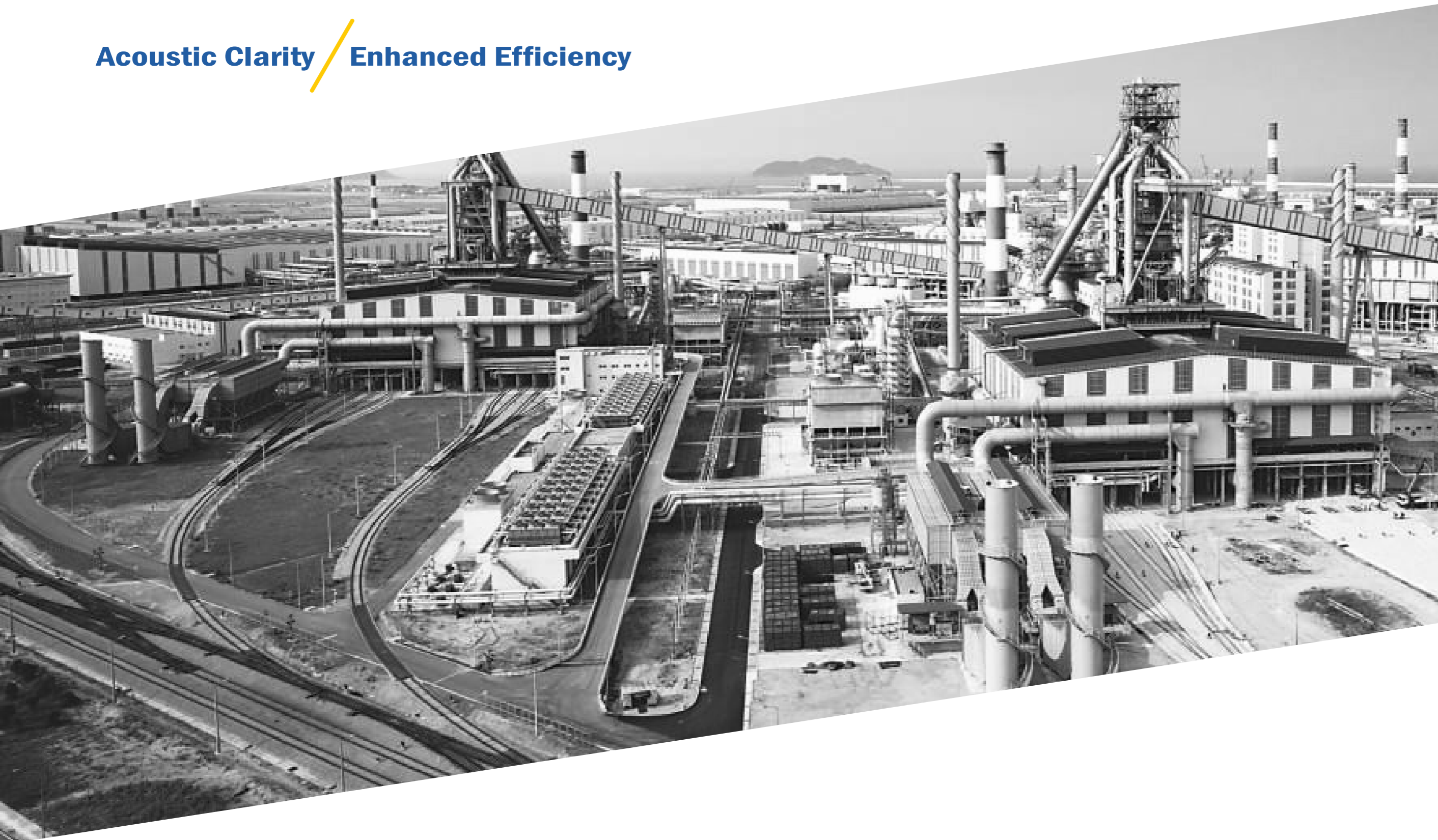


WE Sonik

Acoustic Clarity / Enhanced Efficiency



WHO ARE WE?

Focusing on innovative research and development of solutions for the cleaning and dredging industry, we lead our products with innovation and have established long-term and stable industry university research cooperation relationships with scientific research institutions such as the Chinese Academy of Sciences, Beijing Institute of Technology, Beijing University of Science and Technology, and the National Grain Industry Technology Innovation Center, continuously launching innovative products.

5 **National
Invention Patents**

30+ **Utility Model Patents
Design Patents
Software Patents**



In industries such as steel, metallurgy, thermal power, petrochemicals, thermal power, environmental protection, and warehousing, problems such as material sticking, ash accumulation, bonding, coking, skinning, and flue blockage are commonly encountered in the production process of silos, coal, gas, fuel, waste incineration, and various flue gas and desulfurization, denitrification, dust removal engineering heat exchangers, rotary kilns, etc.





Acoustic Clarity

Enhanced Efficiency

Our company has addressed the industry challenges mentioned above through continuous technological leadership and reform and innovation. We have gradually laid out a complete product matrix, which can achieve dust removal and blockage operations covering multiple industries and working conditions. In the future, we will continue to iterate our products to cope with more complex and diverse markets.

UNIQUE

Compressed air passes through a frequency wave resonance generator to generate a high-frequency resonance shock wave, and then the frequency fluctuation is amplified by a loudspeaker and enters the working area.

Frequency waves propagate in the working area (flue, furnace and silo, etc.), and the resonance generated by frequency waves at multiple frequency points causes the dust deposited on the heated surface to agglomerate. At the same time, under the vibration and repeated accumulation of frequency waves, tiny ash particles are difficult to get close to the boiler surface, thus avoiding further agglomeration.

TECHNOLOGY



DPJS-235

Due to the different structure of the rotary kiln compared to ordinary boilers, the frequency wavelength of this model has a wider coverage range.



DPJS-250

Universal equipment that can be used in various industrial scenarios. Usually placed in enclosed environments such as boilers, flues, and super-heaters.



DPJS-450

Mostly used in open and vertically narrow industrial environments, with explosive capabilities. Mobile and convenient cleaning equipment.



Self-service online cleaning



Out-of-the-box, Adjustable parameters



Low gas consumption of 0.1m³/min



Can cover an axial distance of 50m and a radial distance of 30m



No need to stop production



The material can be used for harsh environments such as high temperature and high corrosion

PARAMETER

Single unit axial cleaning distance (m)	10-50
Single unit radial cleaning distance (m)	10-30
Acoustic source frequency (Hz)	30-20000 (Customizable)
Sound pressure level (dB)	≥ 169 dB
Gas source type	compressed air
Gas source pressure (MPa)	0.35-0.4Mpa
Single unit gas consumption (m ³ /min)	0.098-0.392
Resonance frequency wave (f)	50-550/s
Acoustic characteristics	Low frequency bidirectional spherical wave
Sounder material	Polymer composite steel (multi bead type)
Material selection and manufacturing of conduits	Hollow Bubble Multi Frequency Plate
Tube temperature resistance	800°C-1300°C (Customizable)

What WE Can Do

垃圾焚烧炉
Refuse incinerator

新西南节能环保电力有限公司

+8.8m

CASE ANALYSIS

Waste Incineration Power Plant

Problem

Phase I construction of 2 x 500t/d reciprocating mechanical grate waste incineration production lines; The second phase expansion scale is to incinerate and treat 500t/d of household waste.

The horizontal flue of the two production lines is severely blocked. Attempting to clean with acetylene shock wave is inefficient, difficult to clean, and may cause damage to the production equipment, posing a risk of explosion.

Temperature

After use, the inlet temperature and exhaust temperature trends of high, medium, and low are within a reasonable range, and are lower than those of using acetylene soot blower

Coking situation

The ash on the heating surface of the superheater has significantly decreased, and no coking plate has been found outside the tube bundle



CASE ANALYSIS

Rotary Kiln

Problem

Scale of rotary kiln: $\Phi 1\text{m} \times 10\text{m}$

Production conditions during use: high-speed rail low silicon red mud containing sales pellets (3-8mm), sodium carbonate ratio of 20%, external coal blending amount of 100%, reduction temperature of $1100\text{ }^{\circ}\text{C} \sim 1200\text{ }^{\circ}\text{C}$, pellet kiln time of 4h~5h.

During the operation of the rotary kiln, it can be seen from the observation hole that there are continuous small pieces with circles falling off (not whole pieces falling off), and obvious no clumping can be observed during the operation.

After stopping the kiln to cool down, enter the kiln and observe that the kiln wall is smooth and free of knots.

CASE ANALYSIS

Desulfurization and Denitrification Tower

Problem

In the actual production process, there have been long-term problems of wall hanging and blockage in the bag dust removal and catalyst layer processes. The currently used vibrators cannot solve the existing problems and have a significant destructive effect on the original equipment, reducing its service life and increasing maintenance costs.

The ash hopper and ash bin of the dust collector unload ash smoothly without wall hanging or ash accumulation, improving ash discharge and production efficiency.

There was no internal blockage or damage to the catalyst module in the catalyst layer, and the pressure difference of the denitrification system decreased. The system resistance decreased, reducing energy consumption and improving production efficiency.





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