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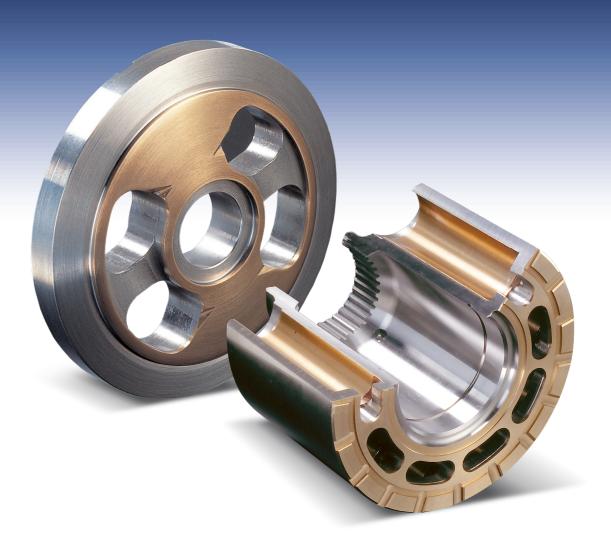
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# **AKASHI GOHDOH**

CORPORATE GUIDE





## **AKASHI GOHDOH INC.**

Innovation has always been central to Akashi's corporate philosophy, from the development of bimetal parts for the hydraulic and construction equipment industries in the '70s, to the recent discovery of Pearlite Bronze, a remarkable lead-free bronze that has come to the rescue of numerous industries struggling to find a lead-free solution with the necessary sliding properties. Innovation has made it possible to complete our corporate philosophy— by providing satisfying solutions to our customers, by nurturing and bettering the lives of our employees, and by becoming a strong, well-rounded and responsible corporate entity.

## 1. Company Profile ————

Company name: AKASHI GOHDOH INC.

Headquaters: 1484 Yokoemachi, Hakusan, Ishikawa

Japan 924-0011

Founded: 15 March 1946

Establishied: January 1954

Capital: JPY 60 million

Employees: 220



#### 2. Main Products

#### Bronze Castings

Akashi Gohdoh bronze castings are used in a variety of applications due to their resistance to corrosion and wear. We are well known in our field for our ability to cast problematic shapes with complicated core arrays.





#### ■ Bimetal Parts for Hydraulics & Other Industries

AG Bimetal is produced by casting molten bronze onto ferrous metals. When this is performed on a high-strength material such as steel, a high-performance bearing capability is added, making it a perfect composite material for certain applications.





### Powder Sintered Bushings

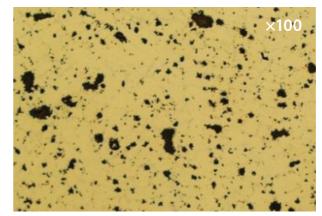
BMRC bushings consist of a back-metal of ferrous metal tubing with a powder sintered bronze lining. This lining is impregnated with a special lubricant. The end product is a self-lubricating bushing with the strength of its ferrous metal backing.



#### 3. New Arrival

#### Pearlite Bronze : More than Just a Lead-Free Solution

By alloying Bi, Ni, and S with a Cu-Sn alloy, a pearlitic microstructure of nano-periodically formed layers of hard and soft phases is created through the control of Sn diffusion and spinodal decomposition temperature. In an effort to take full advantage of the morphological characteristics inherent in its metallographic structure, makers of hydrostatic transmissions are reevaluating the material makeup of the cylinder blocks used in their axial piston pumps and motors. Why? Because Pearlite Bronze offers them an astounding increase in total efficiency.





Microstructure of Lead Brone (80%Cu-10%Sn-10%Pb)

Microstructure of Pearlite Bronze (Cu-Sn-Ni-Bi-S)

#### Pure Copper Rotors for Induction Motors

The use of pure copper for conduction in our rotors makes the motors much more efficient. The table below shows two actual motors using our copper rotors compared to traditional aluminum rotors. This, of course, helps to reduce greenhouse gas emissions by saving energy.





Motor Maker	Frequency (Hz)	Efficiency(%)		Efficiency	Motor Charifestians
		Aluminum	Copper	Increase	Motor Specifications
Company A	50	85.9	87.3	1.4	4Pole, 3.75kW, 400V
	60	86.0	87.6	1.6	
Company B	50	80.6	82.8	2.2	4Pole, 0.75kW, 200/220V
	60	82.5	84.5	2.0	