F-36	Keywords	Y3	equipment or facility	Z2/3	oil/natural gas	E25	general-purpose machinery		
							Miura Co., Ltd.		
	Energy Saving by Multiple Installation System of High-efficiency Small Once-through Boilers and Energy Management System								
	Features								
	 Multi-unit installations of compact, high-efficiency once-through boilers can maintain higher levels of operating efficiency than large-scale fire-tube boilers. Multiple installations take much less space than large-scale 						nticipated energy-saving effect is approximately 10~30%		
	fire-tube ♦ Miura's systems	boiler unique	s. low-NOx technology crea	ates er	vironment-friendly				

- Miura's unique maintenance system, which focuses on preventive maintenance, maintains boiler efficiency.
- Miura has won many awards for technology, both in Japan and overseas.





Miura Intelligence Flexibility System (Central management system)

Multiple Installation System of High-efficiency Small Once-through Boilers

Basic Concept or Summary

- The boiler operating efficiency is maximized by 100% operation. To do this, the operation of multiple small once-through boilers is efficiently controlled to match the fluctuations in required steam flow.
- Information on the necessary combustion quantity is transmitted to the control unit of each boiler according to the steam consumption detected by a pressure sensor.
- Multiple load patterns support various loads and flexible operation.
- The automatic rotation function unifies the load on each boiler.
- The optional central management system includes a monitoring function, automatic reporting function, and other control functions.



Miura online maintenance enables total control of the boiler room, increasing the reliability of utility systems.
 Miura's M-NET System
 Online maintenance is not available in some areas.



Effects or Remarks

• Compared with one large boiler, energy cost can be reduced by approximately 10 to 30%.

Reduction of

11%

- The system is designated as equipment falling under the "Project to verify the effect of environment-friendly high-efficiency industrial boilers" by the Ministry of Economy, Trade and Industry.
- With real-time monitoring over telephone lines and analysis of breakdown data, we provide strong and reliable support for the user's steam system maintenance management.
- Example of replacement installation by a Chinese beer brewery



		Large boiler 10t/h x 3 units	Miura small once-through boiler installation 1.7t/h x 22 units
Operating efficiency	%	85	93
Fuel cost	10,000 Yuan/Year	2938	2611
CO2 emission volume	ton/Year	11528	9922

Measured figures for the whole of 2006, and for January~July 2008 (extrapolated to a one-year figure).

Calculated using a figure of CNY6,800/ton for the fuel unit price



Miura's Global Expansion

Large boiler

3000

2900

2800

2700

2600

2500

2400

Fuel cost (10,000 yuan)



Miura MI system

We have set up overseas 12 affiliated companies and 6 factories in 11 countries, centering around East Asia, South East Asia and North America and will make further efforts to be the best global partner dealing with heat, water and environment.

Installation in Practice or Schedule

- **Domestic** Domestic share: The market share of our small once-through boilers is 55%, with total evaporation of approximately 160,000 t/h.
- **Overseas** Approximately 140,000 small once-through boilers are operating primarily in 18 countries throughout the world.

Contact: Miura Co., Ltd., 7, Horie-cho, Matsuyama, Ehime 799-2696 Tel : 089-979-7000, Fax : 089-978-2321 URL: http://www.miuraz.co.jp