"Tsunagu"Technology New Product News

Fujikura NEWS

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2015 No. 402

2015 New Year's Message from the President

Yoichi Nagahama, President & CEO

I would like to express my great appreciation for your continuous support.
Looking back on the Fujikura Group in 2014, although there was progress in the resumption of nuclear power plant operations and a positive turnaround in certain areas, including an improvement in the export environment owing to the depreciation in the yen' s value, the domestic market continued to mature and shrink. Consequently, aiming to successfully execute our structural reforms, we spent the year focused on tackling the restoration and revitalization of the Electronics business, and on the improvement of earnings in our domestic Infrastructure businesses.
In response to the contraction of the domestic market, we aimed to complete our structural reforms by the end of this fiscal year. We carried out a range of activities, including the elimination and consolidation of manufacturing bases, the restructuring and utilization of Sakura Works, and the implementation of sales and logistics reforms. In addition, we plan to continue to make diligent progress, coupled with the "focus & deep" of businesses ahead of taking inventory at our businesses. The Fujikura group will work together as a team and will become a company with a stronger & higher profit structure.
Now, I would like to introduce our initiatives by each in-house company.
The Power & Telecommunication Systems Company will head for completing structural reform that have been conducted to adjust itself to the changes of the domestic market. It has also decided Brazil, Indonesia and Myanmar as focal points for its global expansion and will steadily explore each market.

The Electronics Business Company has recovered its production capacity, and big orders have been back from last year. It is expected to be profitable in this fiscal year, and will aim at increasing its volume and improving its productivity.
The Automotive Products Company has been growing every year, and will continue to be so in the future. It will expand its business by strengthening customers relation functions through setting up customer service centers to respond customers' needs adequately and proceed business expansion that regards automobiles as platforms.
The R&D will enhance commercialization of fiber lasers, optical interconnections, superconductors and medical. It will create metabolism for the future.
We will inform you of our new products and technologies through Fujikura News. I would like to ask you for your continuous support.

Power and Telecom

Development of High-power Pulse Fiber Laser FLP-G75S

Pulse fiber lasers found widespread applications in the micromachining field, especially in metal marking and scribing and now require higher performance.

Fujikura has developed a high-power pulse fiber laser rated at 75 W (FLP-G75S). This laser has achieved the industry's top-level features including high-power (75 W average output power, 1.1 mJ pulse energy) and high beam quality ($M^2 \leq 1.7$). They will contribute greatly to productivity increases by enabling machining in hard-to-machine areas (Fig. 1), deeper and higher speed machining (Fig. 2). In addition, the new device has been substantially more compact and lighter in weight than existing ones, which helps drastic improvements in flexibility in assembling to laser equipment or systems.

FLP-G75S

Product Specifications

Items	FLP-G75S
Rated power	75 W
Oscillation mode	Q-switch pulse
Wavelength	1080-1090 nm
Pulse width	240 ± 20 ns@70 kHz
Pulse energy	1.1 mJ
Beam quality	≤1.7
Dimensions	220×240×140 (mm)
Weight	Approximately 7.5 kg
Interface	Analog/digital (logic) USB

Fig. 1 : Conceptual drawing of beam quality vs power between other company products and ours

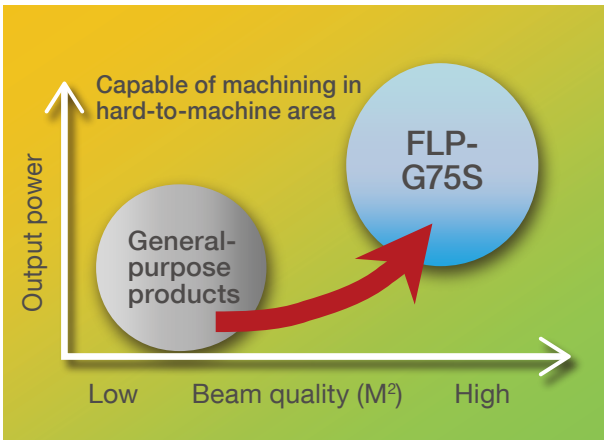
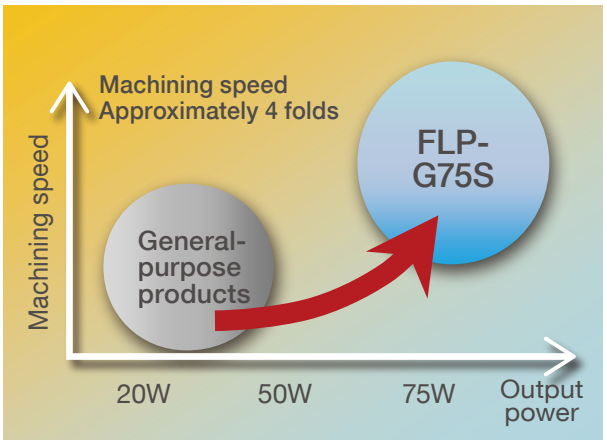


Fig. 2 : Conceptual drawing of power vs machining speed between other company products and ours



New Business Development Center fiber_laser@jp.fujikura.com

Development of CM21 Series Connector Harness for Industrial Ethernet

Fujikura has developed the CM21 over-molded cable assemblies for industrial Ethernet. These cables conform to IEC61076-2-101 M12 D-coding standards and can be used as an interface for industrial Ethernet.
The junction of the CM21 cable plug has an O-ring, which prevents water and dust from entering when the connector is connected. Modular plugs are also available as options regarding the connector to cope with a variety of uses. The products are supplied to customers as over-molded cable assembly and thus help to reduce the total man-hour count of connecting parts.

Major features

■ Mating method (CM21 Connector)
The junction has two positioning keys conforming to IEC61076-2-101 M12 D-coding standards to prevent improper mating. The mating screw is M12 (1 mm pitch) and capable of mating and demating smoothly

■ Water-and dust-proof (Non-water proof modular plug for CM21 connector only)
The inside of a CM21 connector plug has an O-ring that thoroughly prevents water and dust from entering when the connector is connected

■ Cable
The cable uses a AWG22 (0.3 SQ) conductor, which displays reliable communication ability, and double shields as greater importance is put on noise resistance

■ Combination of connector and plug
We produce a cable with a CM21 connector at one end and a modular plug at the other end using modular plugs of AWG22 conductor size in addition to a cable with CM21 connectors at both ends

■ Reduction in total man-hour count
The products are supplied as over-molded cable assembly, which enables our customers to reduce the total man-hour count

	CM21 jack/ CM21 plug	CM21 jack/ modular plug	CM21 plug/ modular plug	Modular plugs at both ends
Rated current	3A/contact	1A/contact		
Rated voltage	DC30 V			
Dielectric withstand voltage	1,000 V AC (r.m.s) /minute			
Insulation resistance	100 MΩ or higher/500 V DC			
Operating temperature range	-25 ˚C to +70 ˚C			
Waterproofness	IP 67 (mated)	CM21 : IP67, Modular plug : IP20		IP20
Number of contacts	4 contacts			

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Power and Telecom

Report on the 52nd Japan National Skills Competition

The 52nd Japan National Skills Competition was held from Nov. 28 (Fri) to Dec. 1 (Mon) 2014 at 13 sites in 8 cities of Aichi Prefecture.

About 1,200 contestants took part in the competition consisting of 41 categories, including electronics, information and telecommunication, machinery, metals, construction and architecture, and service and fashion.

As a sponsor company, Fujikura offered wide support to the Telecommunication Distribution Technology skill category, where contestants competed in network wiring skills, including wiring and fusion splicing of optical fiber cables.

Power & Telecommunication System Strategy & Sales Engineering Division telcon@jp.fujikura.com

Exhibition

WIND EXPO 2015 - Third International Wind Energy Expo & Conference

Date: Feb 25 (Wed)-27 (Fri) 2015, 10:00-18:00 (10:00-17:00 on Feb 27)

Venue: Tokyo Big Sight (Fujikura booth W2-23)

スマートエネルギーWeek 2015 内
WIND EXPO 2015
第3回 国際 風力発電展

Fujikura will be exhibiting at WIND EXPO 2015 - Third International Wind Energy Expo & Conference of Tokyo Big Sight.

This exhibition will show torsion resistant power cables for wind turbines. In addition, it will also present IEC- or IEEE-conforming separable connector used in Ring Main Unit or transformer.

Fujikura has been working on the development of low-cost, good workability 33 kV materials to meet growing demands for materials connected to 33 kV systems in step with increasing power generation from wind turbines and windfarm sizes.

Our exhibits will center on the new products for 33 kV systems.

We are really looking forward to seeing you at our booth.

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