

January 20, 2014

Hitachi High-Technologies Corporation Enters the Overhead Transmission Line Inspection Equipment Business through Acquisition of Exclusive Distribution Rights from HiBot Corporation
— Aiming for business expansion in the social innovation field —

Hitachi High-Technologies Corporation (TOKYO: 8036, Hitachi High-Tech) and Hitachi High-Tech Fine Systems Corporation (Hitachi High-Tech Fine Systems), a wholly owned subsidiary of Hitachi High-Tech, will enter the overhead transmission line inspection equipment business through the acquisition of exclusive distribution rights from HiBot Corporation (HiBot Corp.), a business venture. The business seeks to automate and increase the efficiency of overhead high-voltage transmission line inspections. Hitachi High-Tech and Hitachi High-Tech Fine Systems will build a framework for conducting development, manufacturing, and sales activities in this new business.

The Hitachi High-Tech Group is targeting the social innovation business as one of its future growth fields. By entering the overhead transmission line inspection equipment business, the Hitachi High-Tech Group aims to expand its business in this field.

In many countries and regions around the world, electric power is supplied through the overhead transmission lines. To ensure the stable supply of electric power, it is critical to carry out preventive maintenance and inspections of the overhead transmission lines. Currently, inspection of overhead high-voltage transmission lines is performed as an aerial inspection by workers or carried out visually using binoculars or helicopters. However, aerial inspections require personnel to walk on the cables as they perform the inspections. This entails a tremendous amount of labor and time, and also requires the transmission of electricity to be stopped. Therefore, one major priority has been to improve the accuracy and efficiency of inspections.

In 2006, HiBot Corp. started to develop technologies to address these issues in collaboration with The Kansai Electric Power Co., Inc. (KEPCO), J-Power Systems Corporation, and the National University Corporation Tokyo Institute of Technology, and has developed Expliner—a robot used to check for damage on overhead high-voltage transmission lines.

The overhead high-voltage transmission line inspection robot Expliner is a self-propelled robot that moves along high-voltage overhead transmission lines to examine their external surface conditions and measure their outer diameter. A balance control mechanism using counterweights that HiBot Corp. has developed in-house enables Expliner to overcome obstacles on overhead transmission lines such as suspension clamps (*1), allowing operators to inspect multiconductor transmission lines(*2) in parallel.

With the development of Expliner by HiBot Corp., Hitachi High-Tech Fine Systems has reached an agreement on conducting the development, design, and manufacturing of this overhead transmission line inspection equipment, as well as conducting exclusive sales activities in Japan and overseas.

Hitachi High-Tech Fine Systems has been developing and manufacturing railroad track/wire inspection equipment as part of its social infrastructure inspection business. In the process, the company has cultivated mechatronics, sensor, and image processing technologies over many years. Looking ahead, Hitachi High-Tech Fine Systems will work to develop overhead transmission line inspection equipment technologies and products in collaboration with HiBot Corp. and KEPCO, with the view to providing innovative solutions that meet customer needs.

Furthermore, from FY2014, the Hitachi High-Tech Group will conduct Japan and overseas sales activities for overhead transmission line inspection equipment by taking advantage of its global network.

By entering the overhead transmission line inspection equipment business as announced today, the Hitachi High-Tech Group aims to achieve automation, cost reductions, and improved inspection accuracy for overhead transmission line inspections in countries worldwide, and thereby expand this new social infrastructure inspection business in the social innovation field.

*1 Connected suspension clamps that hold overhead transmission lines away from towers (suspension clamps: fixtures designed to provide insulation between the transmission lines and the towers)

*2 An overhead transmission line consisting of two or more electric cables having the same potential (phase) to pass an electric current by dividing it into two or more parts. The target is currently two and four conductors.



Overhead High-Voltage Transmission Line Inspection Robot Expliner

Overview of HiBot Corporation

Name	HiBot Corporation
Location	2-18-3, Shimomeguro Meguro-ku, Tokyo
Representative (Joint)	Naho Kitano, Michele Guarnieri
Business lines	Founded as a business venture by the Tokyo Institute of Technology, HiBot Corp.'s main businesses are the development of innovative, cutting-edge robots, and the manufacturing and sale of electronic devices essential to the propulsion and control of those robots. The company is developing robots that perform intelligent work with tasks including pipe inspections at plants; inspections of social infrastructure such as high-voltage transmission lines, waterworks and gas pipes, tunnels and bridge piers; welfare and nursing care; and responses to the accident at the Fukushima Daiichi Nuclear Power Station.
Number of employees	8
Establishment	2004
Capital	35.7 million yen
Website	http://hibot.co.jp/en/home

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