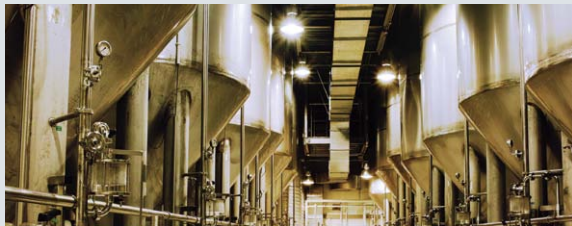# Microbrewery

Applicable Area : Factory production lines

Application : **Monitoring of carbon dioxide concentration, etc., in fermentation and maturation processes**

■ The fermentation and maturation processes greatly affect the quality of the beer. The DL8 is used to monitor carbon dioxide levels and other values in the brew chamber, where fermentation and maturation take place, all the time.

■ When an abnormal condition occurs, such as a pressure abnormality in the fermentation tank or a carbon dioxide leak in the brew chamber, an alarm e-mail is sent to the smartphone(s) and/or computer(s) of maintenance personnel and process managers in the plant.

■ Regular report e-mails contain current values such as alcohol content, fermentation level, density and temperature allowing for quality control to be achieved without onsite monitoring of instruments.

■ When there is a carbon dioxide concentration abnormality, a contact signal output by the alarm output function turns on alarm lamps inside or at the entrance of the brew chamber, indicating that the concentration is dangerously high.
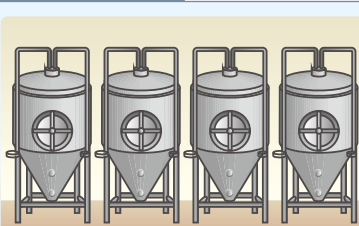

What's the focus?

● Using in-house LAN and an e-mail server, a system can be developed economically.

● The current values of various measurement items can be included in the e-mail text, clarifying it enables the user to check the on-site status of processes as soon as the e-mail is received.

● Abnormalities are detected through the analog alarm function, and lamps and/or buzzers are used for external notification through the alarm output function.

Maintenance Personnel

Mail

Smart Phone

INTERNET

ISP

ADSL / Fiber Optics

Process manager

Web Monitoring **Mail**

PC

E-mail Server

In-house LAN

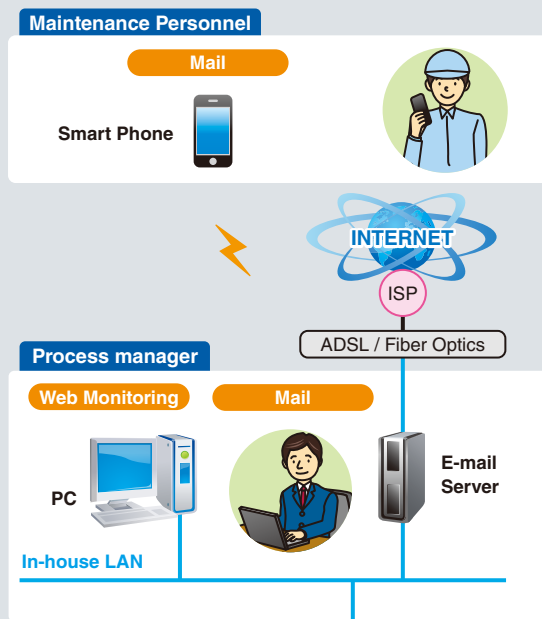**Brew chamber for fermentation and maturation processes**

Fermentation tank

Ai × 4
(fermentation tank pressure, tank internal temperature, carbon dioxide concentration etc.)

Di × 4
(fermentation tank valve open/close signal)

DL8 (type C)

Alarm lamps, buzzers

Do × 4

• Web browsed views are images that are subject to change without notice. • In order to effect the applications on this page, static IP or dynamic DNS is required.
• M-System Company does not provide smart phones and/or telecommunication services.