Bosai Solution ID : JBP00049



Realization of prevention/mitigation of flood disasters in rivers and dams by using reliable water sensors.

## **Monitoring Sensors for River Disasters TAKUWA Corporation** Typhoon-fed flooding occurs every year to cause enormous damage. To protect the life and property from river disaster, TAKUWA CORPORATION's Quartz Type Water Level Gauge equipment for disaster-prevention are now used as (Water Temperature Correction Type) . monitoring and observation. Dam Microwave type Water Level Gauge Waterway Quartz Type Water Level Gauge (Optical Fiber Transmission Type) Sewage Processing Plant Construction **Barrage for** Laser type Work Office Water Level Gauge Water Intake Pressure type Water Level Gauge Quartz Type Water Level Gauge **Agricultural Water Color Staff Gauge** Digital type Water Level Gauge **a**, **a River-mouth Barrage**

Quartz Type Water Level Gauge



# Digital type Water Level Gauge



**Quartz Type Water Level Gauge** 

(Water Temperature Correction Type)



Quartz Type Water Level Gauge Pressure type Water Level Gauge (Optical Fiber Transmission Type)



Microwave type Water Level Gauge Laser type Water Level Gauge







#### Tsunami Cyclone Storm Surge Flood

#### Solution Purpose

Prevention & Mitigation Preparedness Response

## Solution Theme

Research & Investigation Risk Assessment Infrastructure Technology Information & Communication Technology Products & Goods

## **Technology Subject**

Feasibility Study Risk Monitoring River & Basin Dam & Reservoir Sabo Port Essential Utilities Urban Information Gathering Information Analysis & Judgement Information Communication Information Platform Machinery & Equipment

## Advantages

Our water sensors have high reliability which is composed of high accuracy and durability, and lineup which is selectable depending on purpose and site conditions. These sensors can contribute to flood forecasting/warning and appropriate gate operation in rivers and dams in order to privent and mitigate the flood disasters.

## **Solution Illustrated**

Proposal and provision of reliable water sensors which are selectable depending on purposes and site conditions

## Background

Using reliable water sensor is fundamental and important for appropriate flood warning/forecasting of rivers and dams. Because, some errors will bring inappropriate cognizance and operation, furthermore these may add serious flood damages.

We can provide such reliable sensors which have been improved based on experience of on-site operation at rivers and dams in Japan and Asian countries past 60 years.

# **Exposition of the Solution**

#### 1. Water Level Gauge

We have lineup of sensors which can be selected depending on purpose, needs and site conditions of river and dam (accuracy, range, installable condition, durability and cost etc.) Especially, our sensor's accuracy, stability and durability can contribute to accurate and appropriate monitoring/control of river and dam.

- 1) Quartz type: High accuracy and durability, wide measurement range
- 2) Fiber-optic quartz type: High lightning protection by using fiber optic for sensor signal line
- 3) Others: Pressure type, Ultrasonic type, Radar type etc.

# **Achievements of Examples**

#### Clients in Japan

- Ministry of Land, Infrastructure, Transport and Tourism (MLIT)
- Ministry of Agriculture, Forestry and Fisheries (MAFF)
- Japan Water Agency (JWA)
- Japan Meteorological Agency (JMA)
- Local governments
- Electric companies (TEPCO, KEPCO etc)
- Clients in overseas
- Vietnam (EVN)
- Myanmar (MOAI)
- Indonesia (PU, DPU-DKI etc)
- South Korea (MOLIT etc)
- Application system of our sensors
- Flood forecasting and warning system, Dam control system

# **Corporate Profile**

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