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# ***Opening Remarks/ JWWA's Inspection & Certification Systems***

***~2015 Water Associations Meeting  
in Saitama***



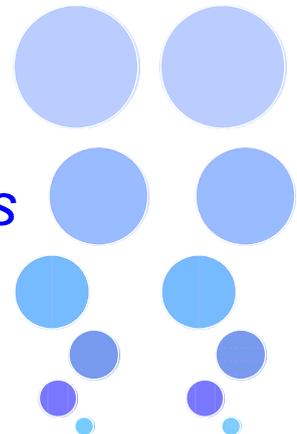
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## ***Agenda***

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- ***. Review of 2014 Associations Meeting  
in Nagoya***
- ***. Outline on Quality Management of  
Materials by JWWA***
- ***. JWWA's Inspection Service***
- ***. JWWA's Certification Services***
- ***. Conclusion***

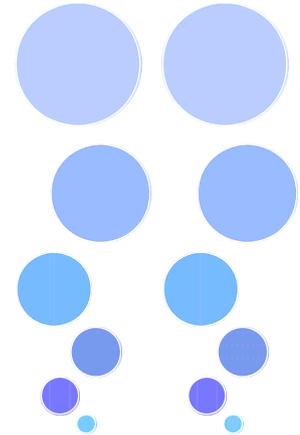


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## *. Review of 2014 Association Meeting in Nagoya*



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3

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### *2014 JWWA General Assembly & Research Conference*



*Long Lasting Partnership between JWWA and*

*AWWA (USA),  
CTWWA (Chinese Taiwan),  
IWWA (India),  
IWA (International)  
KWWA (Korea),  
MWA (Malaysia),  
PERPAMSI (Indonesia),  
PWWA (Philippine),  
TWWA (Thailand),  
WSAA (Australia)*



*29<sup>th</sup>-31<sup>st</sup> October 2014 - Nagoya-city, Japan -*



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4

# AWWA: American Water Works Association



Jim Chaffee  
(Immediate Past President)  
Colin Chung  
(Asset Management Manager)



# CTWWA: Chinese Taiwan Water Works Association



Fu-Tien Chen (President)  
Sun-Kuei Wang (Secretary General)  
Yang-long Wu (Commissioner, Taipei  
Water Department)



# IWWA: Indian Water Works Association



Anand Wachasundar  
(Ex Director (International))



# IWA: International Water Association



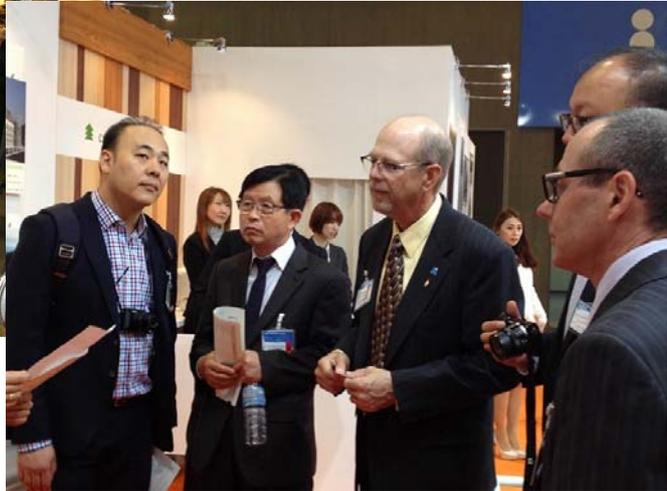
Ganesh Pangare  
(Regional Director)



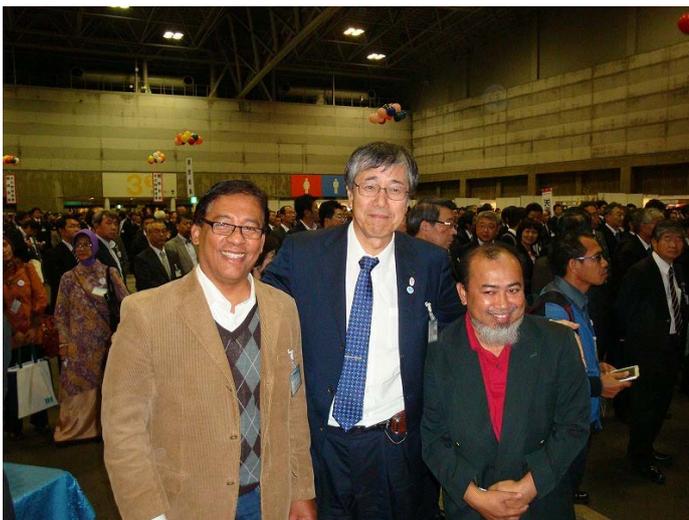
# KWWA: Korea Water and Wastewater Works Association



Yong-Cheol Choi (Vice President)  
Seong-hwan Ahn (Team Manager)



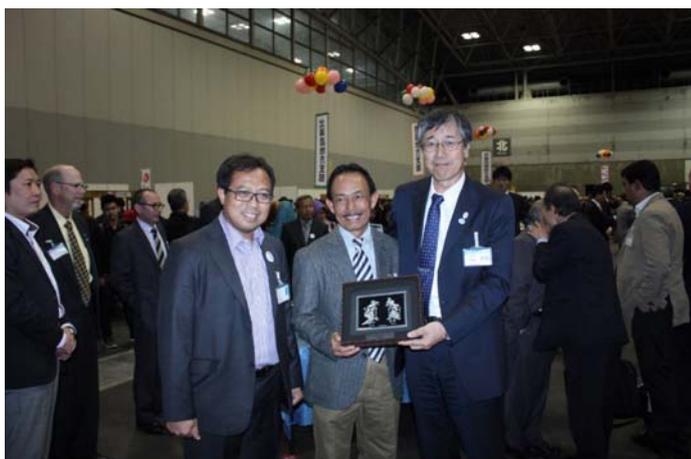
# MWA: Malaysian Water Association



Syed Mohd Adnan ALHABSHI  
(President)  
Mohmad Asari DAUD  
(Honorary Secretary General)



## PERPAMSI: Indonesian Water Supply Association



Rudie Kusmayadi (Chair)  
Ashari Mardiono (Secretary General)  
Teguh Subekti (Executive Director)  
Benny Andrianto Antonius  
(Vice President PT. ATB Batam)



11

## PWWA: Philippine Water Works Association



Edgar C. Lopez (President)  
Nenita B. Javier (Office Manager)  
Ester T. Vengco (Director)



12

## TWWA: Thai Water Works Association



Leuchai Deethavorn (Vice Chairman)  
Somchai Monburint (Vice Chairman)



13

## WSAA: Water Services Association of Australia



Stuart Wilson  
(Vice Executive Director)



14

## Exhibition and Excursion



15

## *Water Associations Meeting*

*- Sharing Good Practices -*

- Sharing knowledge, experiences and backgrounds
- Possibility of Mutual Cooperation



16

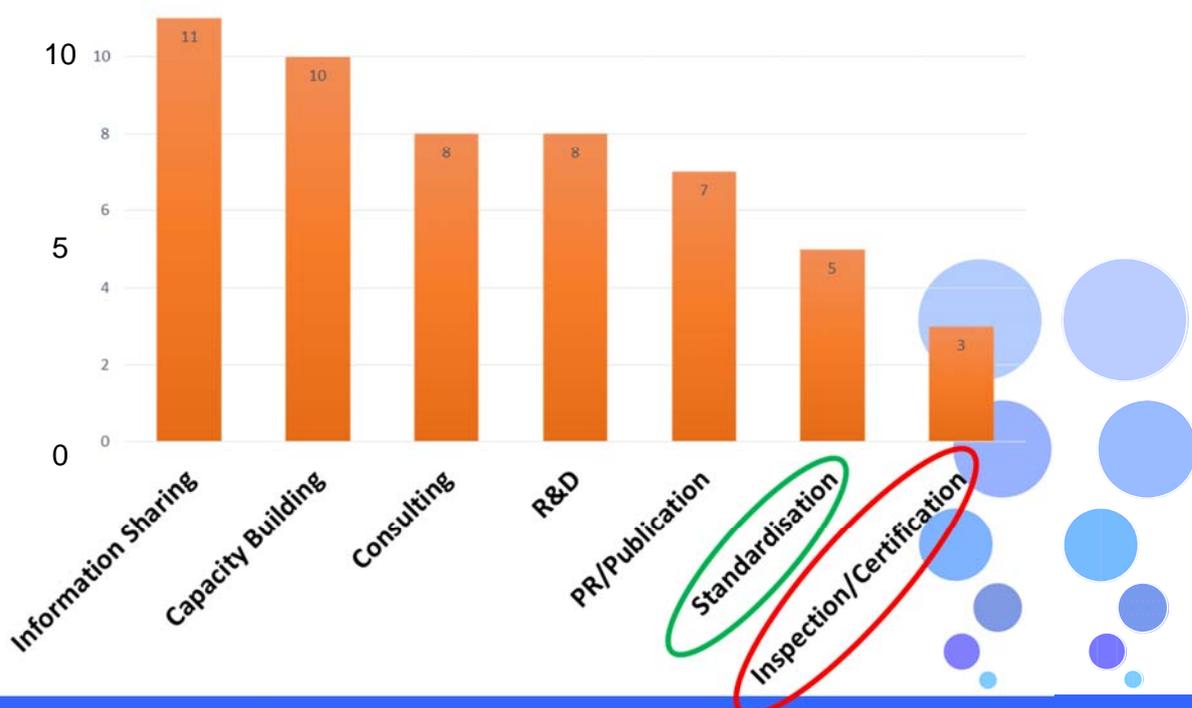
## What we confirmed in the Associations Meeting in 2014

- 1) Information sharing, Capacity building, R&D and Consulting are common important roles and functions of water association
- 2) Each association's activities are corresponds to their country's current water issues and contribute to development of their water sector
- 3) Further collaboration with water associations will contribute to find a way out for water issues in the world

17

### Fig.1 - Roles and Functions of Waterworks Associations

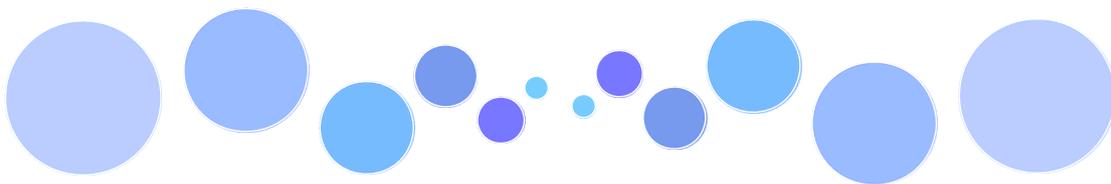
Number of Associations



18

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# *. Outline on Quality Management of Materials by JWWA*



19

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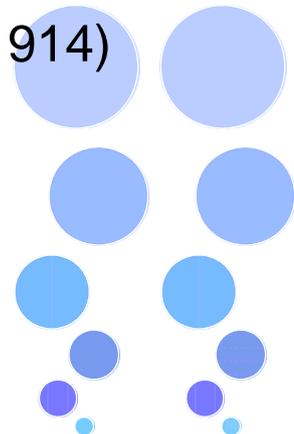
## **Brief History of JWWA**

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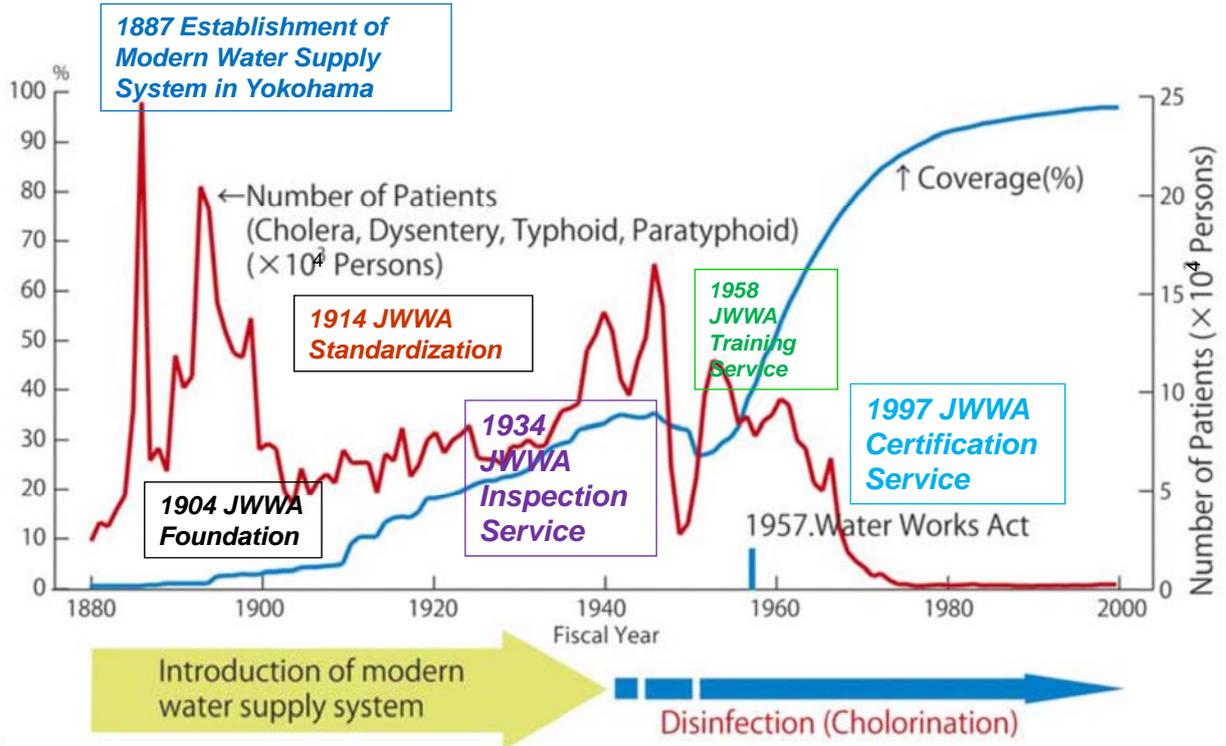
1904 Establishment of JWWA

*to Start with setting standard of  
the **Water Quality Examination Method***

- Water Related Products' Standards (1914)
- Inspection Service (1934)
- Training Service (1958)
- Certification Service (1997)



# Brief History of Japanese Water Supply System & JWWA



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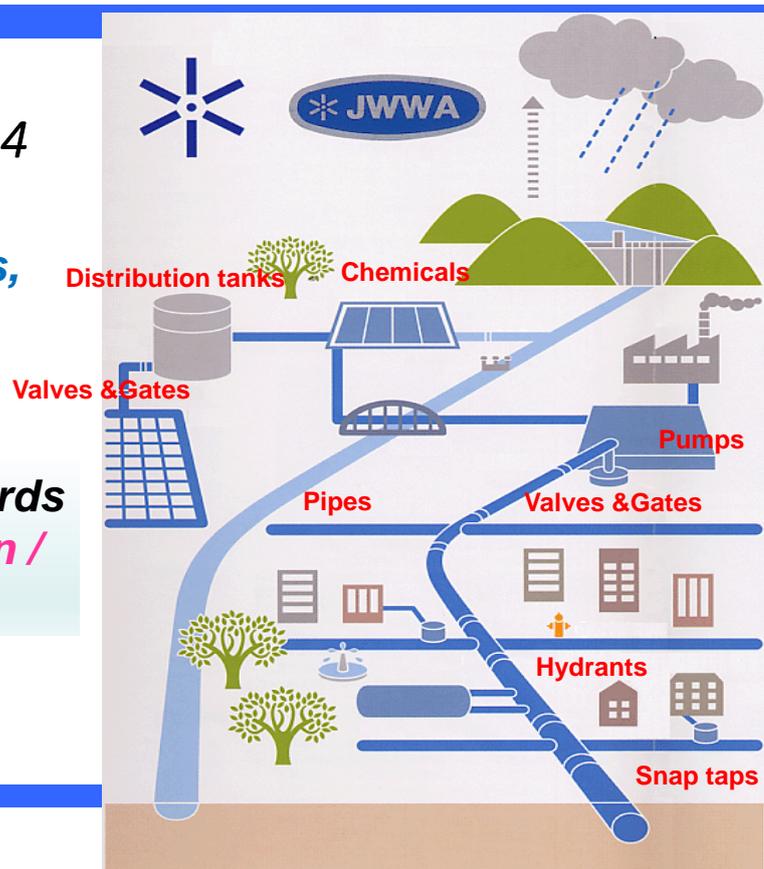
21

## Water Related Products' Standards

• Establishment in 1914

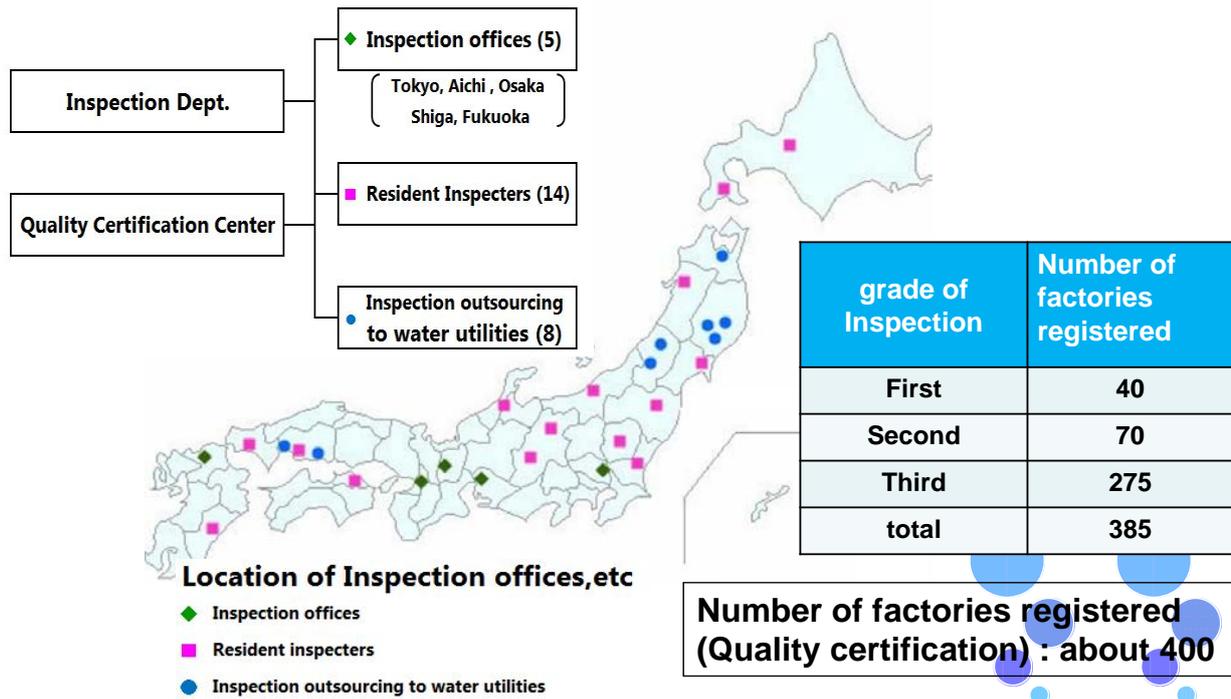
**Pipes, Fittings, Valves, Chemicals...**

JWWA Sets the **Standards** and provides **inspection / certification Services**

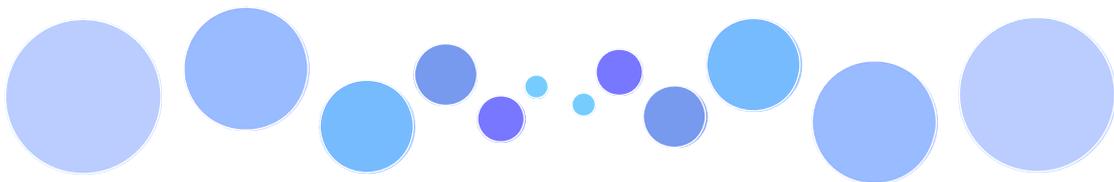


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# Branch Office for Inspection and Certification Services



## JWWA's Inspection Services



# Background and History of JWWA Inspection System

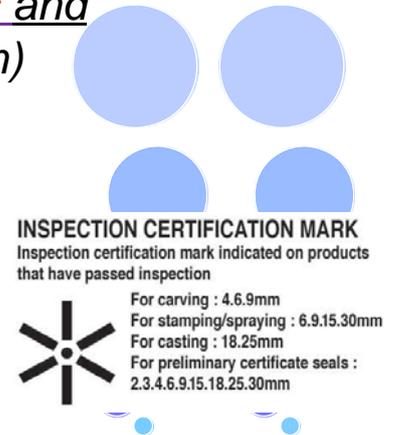
<Before 1934>

- Most Utilities Dispatched their staffs to the manufacturing factories etc.  
(with their own emblems and serial numbers)

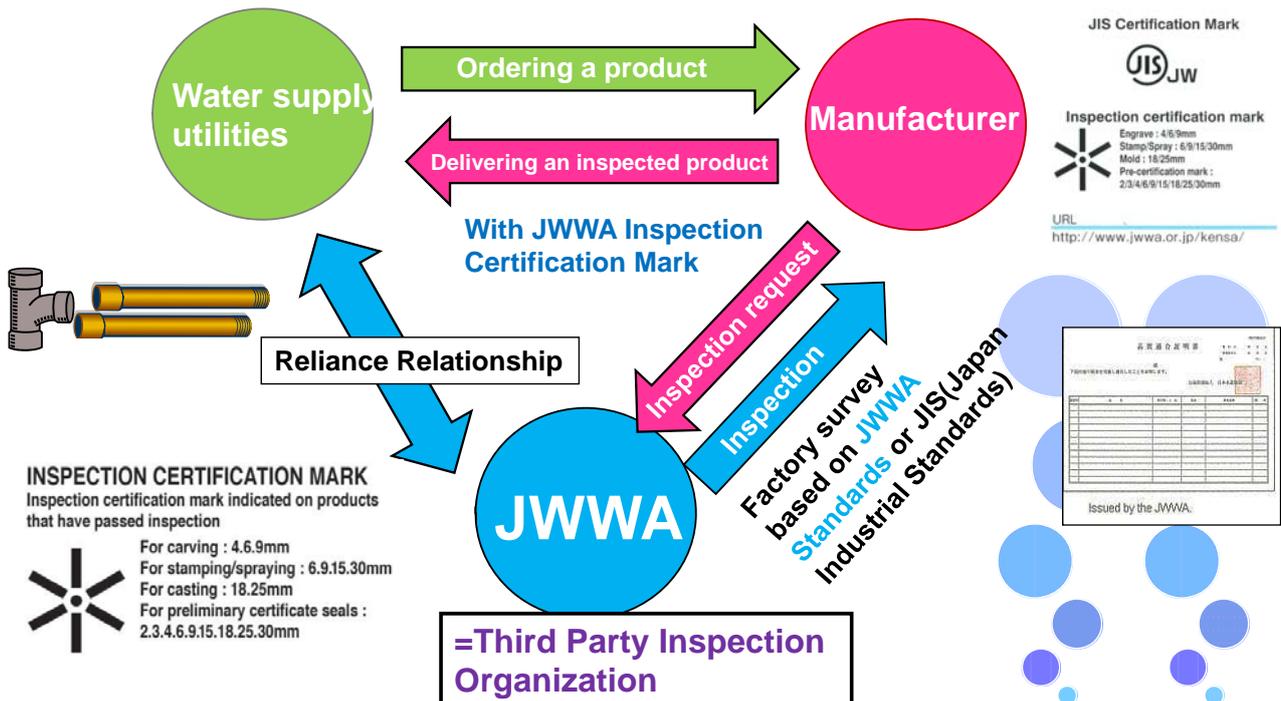
*Inefficiency and Ineffective* for both *Utilities* and *Manufacturers* (=Difficulty of Mass-production)

<In 1934>

- JWWA “Inspection Service” was started
- To use iron pipes identified with the “*JWWA Inspection Certification Mark*”



# Current Inspection Service



## Water Related Products (Pipes)

- Ductile iron pipe
- Steel pipe
- Rigid polyvinyl chloride pipe
- Polyethylene pipe for water distribution
- Stainless steel pipe



27

## Water Related Products (Ancillary equipments)

### *Valves, faucets, and taps*

- Ductile iron gate valve, Soft-seal gate valve
- Butterfly valve
- Underground fire hydrant
- Quick air valve
- Cooperation stop with saddle

### *Covers and casings*

- Circular and rectangular iron covers
- Screw-type valve casing
- Resin concrete box



28

## Water Related Products (Others)

### Paints

- Epoxy resin powder paints for coating inside surfaces of water supply ductile iron pipes
- Liquid epoxy resin paints for waterworks
- Solvent-free epoxy resin paints for waterworks
- Synthetic resin paints for water supply ductile iron pipes
- Mortar linings
- Polyurethane coatings
- Polyethylene coatings



### Others

- Rubber rings
- Polyethylene sleeves

29

## Ductile iron pipe Hydrostatic test

Ductile iron pipe	Hydraulic tester
Nominal size 300 or less	6.0 MPa
Nominal size 350 - 600	5.0 MPa
Nominal size 700 - 1,000	4.0 MPa
Nominal size 1,100 - 1,500	3.0 MPa
Nominal size 1,600 - 2,000	2.5 MPa

(Evaluation)  
•Evaluate based on the visual inspection of products and any reduced readings in pressure gauge (**JIS B7505**: Bourdon gauge).

(Precautions)  
•Ensure appropriate lighting for detection of any water leakage.  
•Check the products before testing for any water leakage.  
•Pay attention to higher water pressures.

30

# Ductile iron pipe material testing



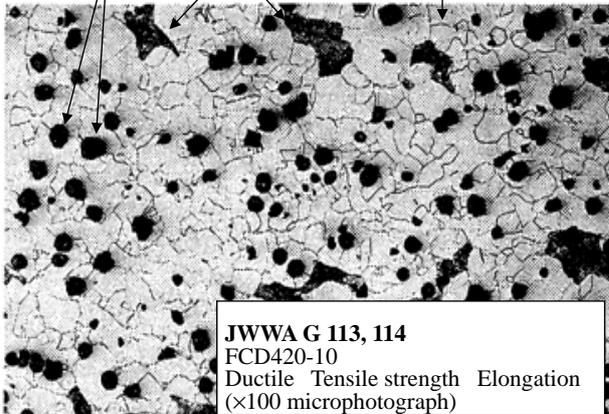
# Ductile iron pipe Spheroidized ratio of graphite test

Portable microscope



Graphite Globular  
Rate: Over 80%

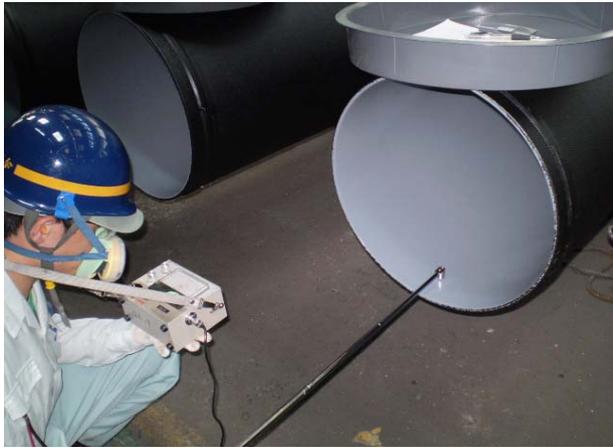
Graphite, Pearlite, Ferrite



JWWA G 113, 114  
FCD420-10  
Ductile Tensile strength Elongation  
(×100 microphotograph)

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## Inspection of internal coating of Ductile Iron Pipe



33

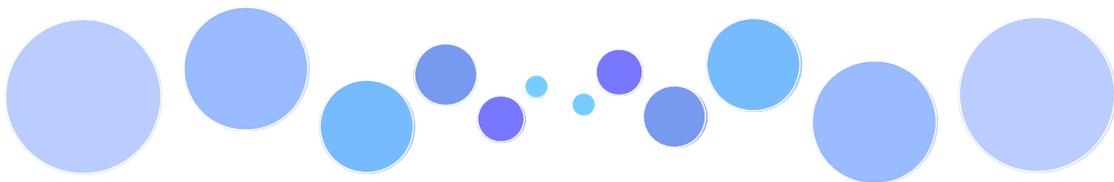
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## . JWWA's Certification Services

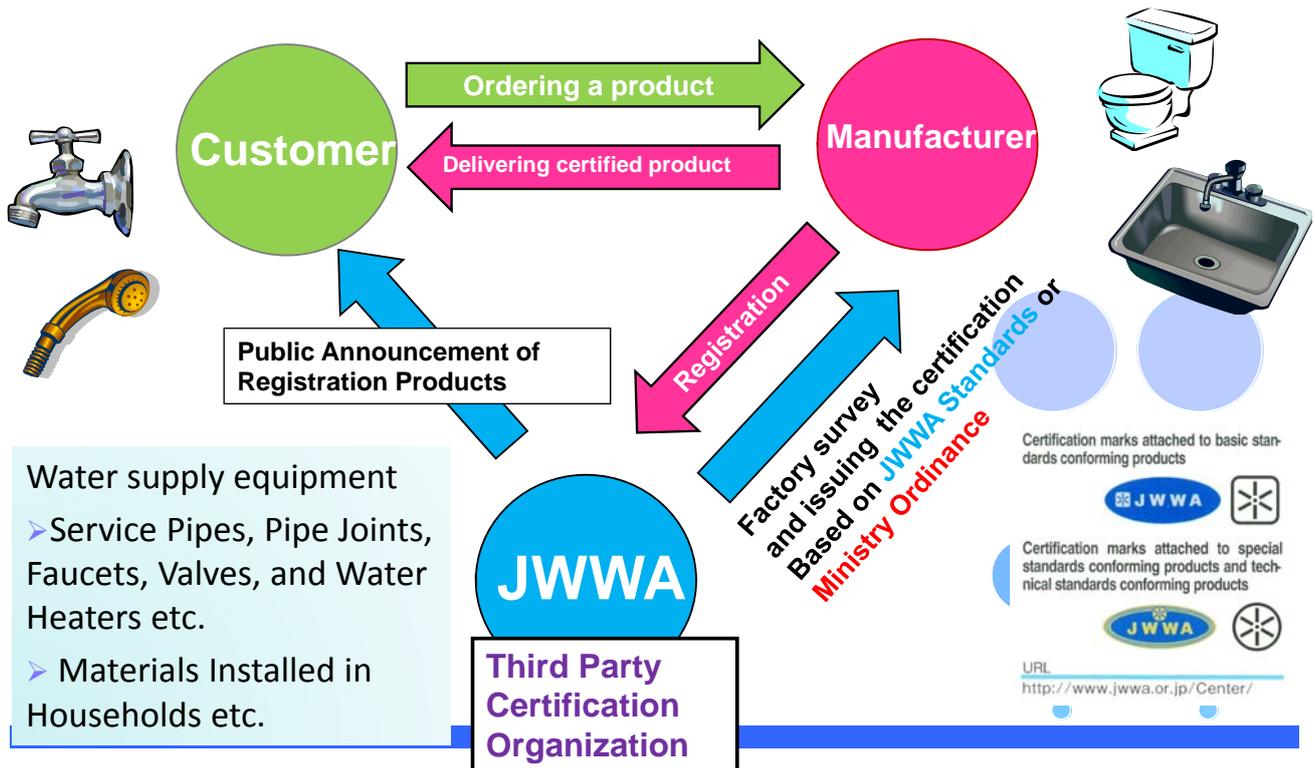
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34

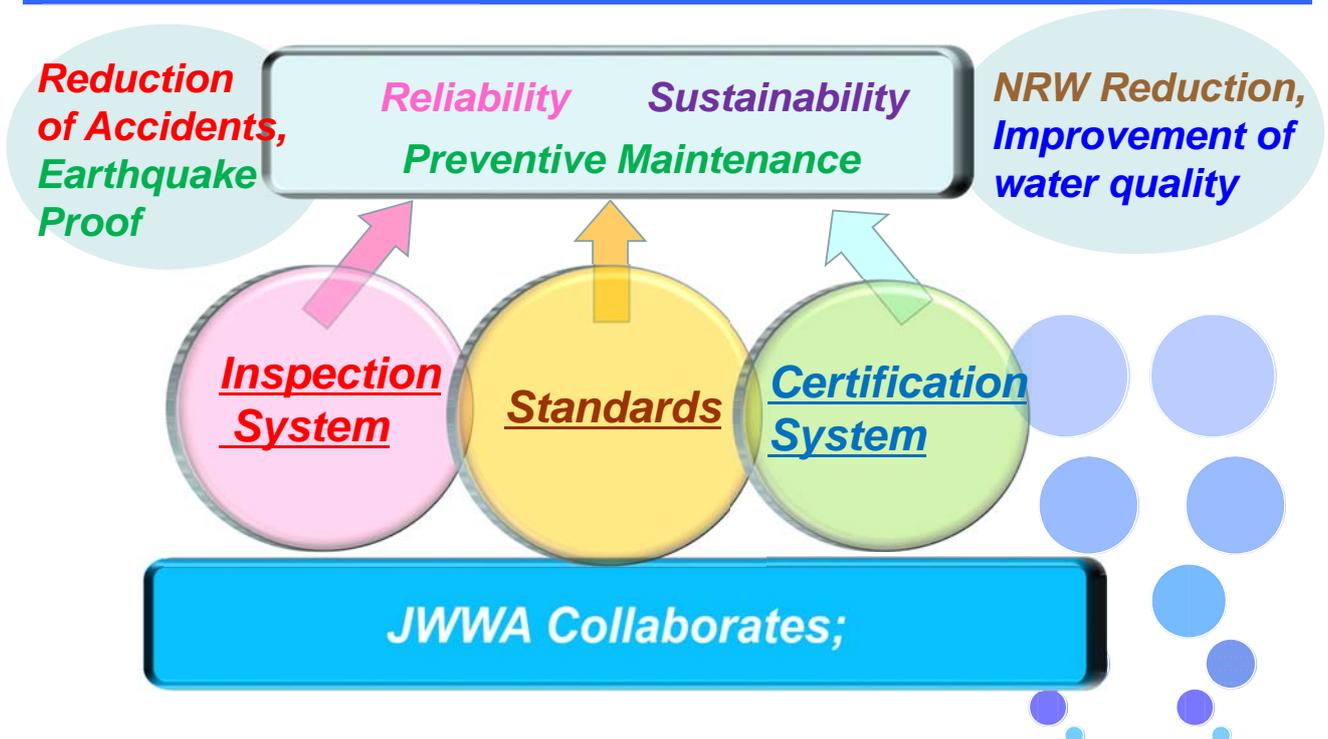
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# Certification Service



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# Conclusion



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# *The End*

Thank you for your attention.

**sakuma@jwwa.or.jp**  
**<http://www.jwwa.or.jp/>**



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## *Inspection methods*

(References)

- Joint performance testing
- Water quality effect test
- Mechanical property inspection (Tensile strength, elongation)
- Spheroidized ratio of graphite test
- Water-tightness test
- Geometrical and dimensional inspection
- Weight measurement
- Visual inspection
- Coating and lining inspection  
(Appearance, pin-hole, thickness)
- Markings inspection

