

# 『Non Scolor』

## Innovative Chemical-Less Anti-Scale Device

Completely Maintenance free  
Requires no electricity & consumables



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## “Non Scolor” Features

“Non Scolor” prevents thick & hard solidified calcium scale adhere to inner wall of boiler, heat exchanger and pipe work.



### <Features>

- ◆ Making ultra fine calcium carbonate and disperse it into water, it prevents solidified calcium scale adhere to inner wall of the system.
  - ⇒ Prevents damage on pump, decrease of heating performance, dramatically reduces down time of production and frequency of cleaning work.
- ◆ Reduces grow of bacteria and generation of bio-film.
- ◆ Electricity, chemicals and filters are not required at all. (ECO System)

# Problem of Calcium Scale and Solution (1)

## ◆ Adhere to Inner Pump Case

Thick & hard calcium scale adhere to inner wall of pump case causes, ◦

- Wearing and damage on parts inside pump.
- Decrease of pump suction power.
- Frequent stop of production due to changing parts or cleaning work.

## ➤ Improvement by Non Scolor

**Non Scolor makes soft & ultra fine calcium scale and solves it.**

**Before Non Scolor  
Installation**



**6 months after  
installation**



### ■ Calcium Scale inside pump

- **Hard solidified calcium scale does not exist** after Non Scolor installation.

### ■ Calcium Scale

- **Calcium scale was soft and ultra fine condition** after Non Scolor installation.

## Problem of Calcium Scale and Solution (2)

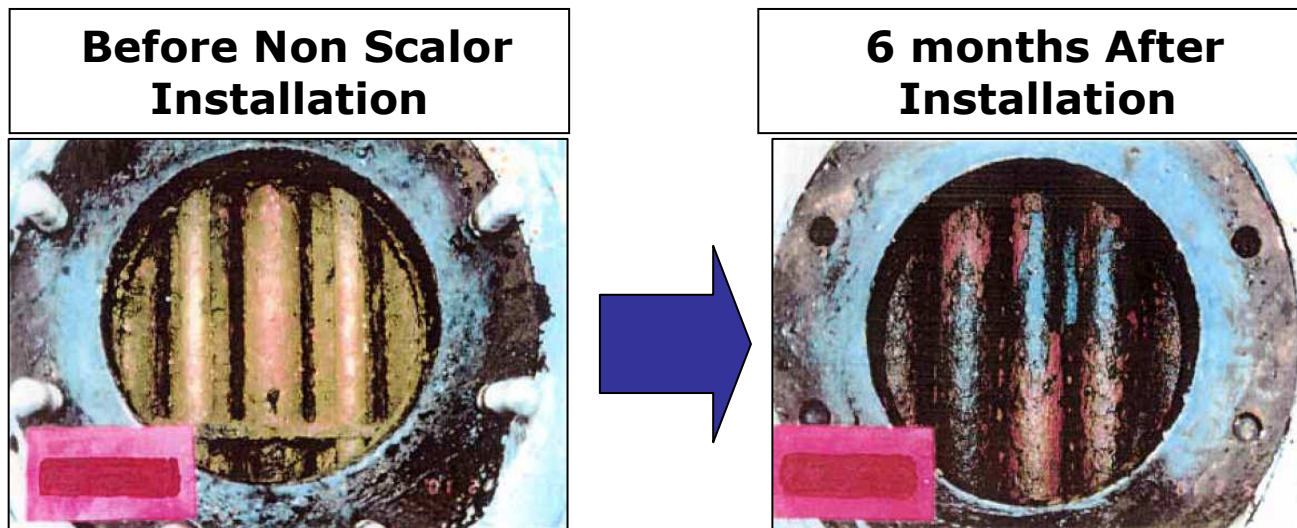
### ◆ Adhere to Inner Wall of Heat Exchanger

Thick & hard calcium scale adhere to inner wall of heat exchanger causes,

- Decrease of heat exchanging performance.
- Frequent stop of production due to cleaning work.

### ➤ Improvement by Non Scolor

**Non Scolor makes soft & ultra fine calcium scale and solves it.**



• Hard & thick calcium scale was adhered to the tube of heat exchanger at 5 months after cleaning.

• **No calcium scale was observed on the tube** of heat exchanger at 5 months after Non Scolor installation and cleaning.

# Problem of Calcium Scale and Solution (3)

## ◆ Adhere to Inner Wall of Water Pipe Work

Thick & hard calcium scale adhere to inner wall of water pipe work causes,

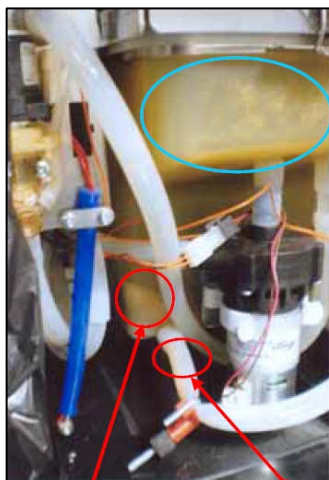
- Decrease or stop of water supply due to blockage.
- Increase of maintenance cost due to changing parts and cleaning work.

## ➤ Improvement by Non Scolor

**Non Scolor makes soft & ultra fine calcium scale and solves it.**

**[Example of Coffee & Tea Vending Machine in U.K.]**

**Without Non Scolor**



A

B

**With Non Scolor**



A

B

**A : Lower Water Tank**

**<Without "Non Scolor">**

40mm high and long calcium scale.

**<With "Non Scolor">**

**5~10mm high and long calcium scale.  
Reduced more than 75%.**

**B : Water Supply Tube**

**<Without "Non Scolor">**

40mm long calcium scale,  
blocked 50% of inner tube.

**<With "Non Scolor">**

**No calcium scale at inside tube.**

# Problem of Calcium Scale and Solution (4)

## ◆ Adhere to Surface of Mirror and Glass

Calcium scale adhere to surface of mirror and glass causes,

- Unclear and dirty condition.

## ➤ Improvement by Non Scolor

**Non Scolor makes soft & ultra fine calcium scale and solves it.**

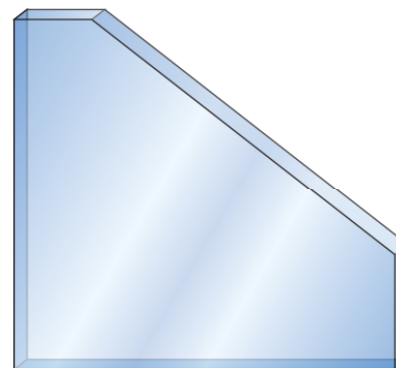
**[Example of glass wall at shower room in U.K.]**

**Before Non Scolor Installation**



Due to adhere of calcium scale on the glass, condition of glass was unclear and white.

**After Non Scolor Installation**



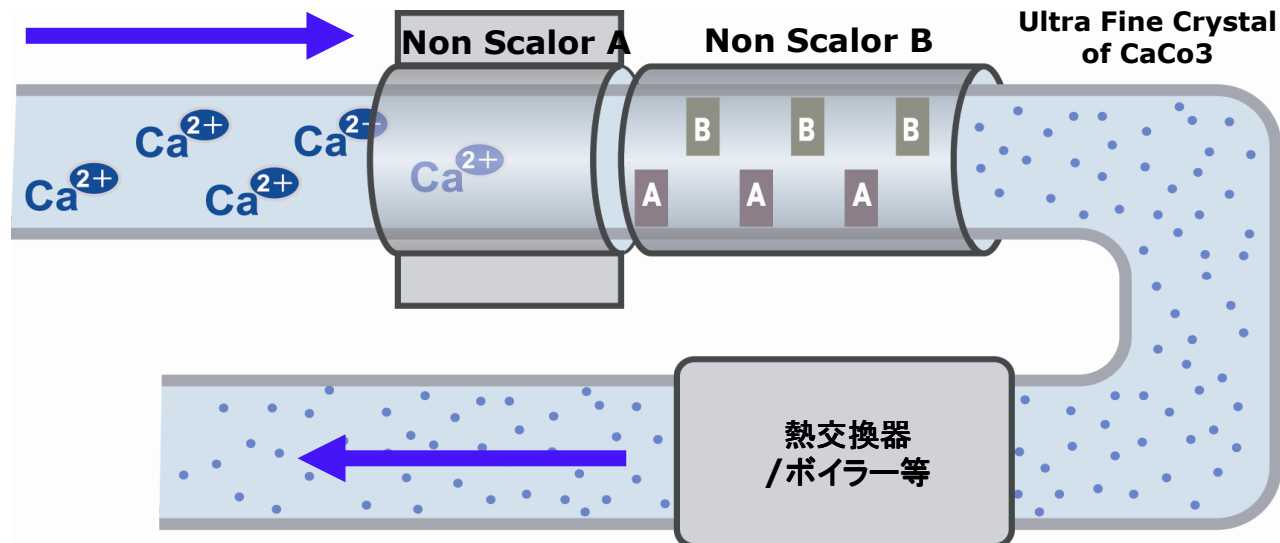
After Non Scolor installation, no calcium scale adhere to glass and it keeps glass condition clean.



# Function of Non Scolor

## ◆ How Non Scolor Prevents Adhere of Thick & Hard Calcium Scale

- Calcium iron in water gradually deposit and become huge crystal of calcium carbonate. It adheres to inner wall of boiler, heat exchanger and pipe work and build up thick & hard calcium scale.
- Non Scolor B incorporates 2 kinds of metal plates with different electric characteristics. Calcium iron in water is forced into oxidation by these plates and become ultra fine crystal of calcium carbonate. And disperse into water.
- Ultra fine calcium carbonate dispersed in water keeps its condition even there are temperature variation in the system. And does not build up thick & hard calcium scale.
- Non Scolor A prevents calcium scale adhere to metal plates inside Non Scolor B.



# Non Scolor Type and Installation Place

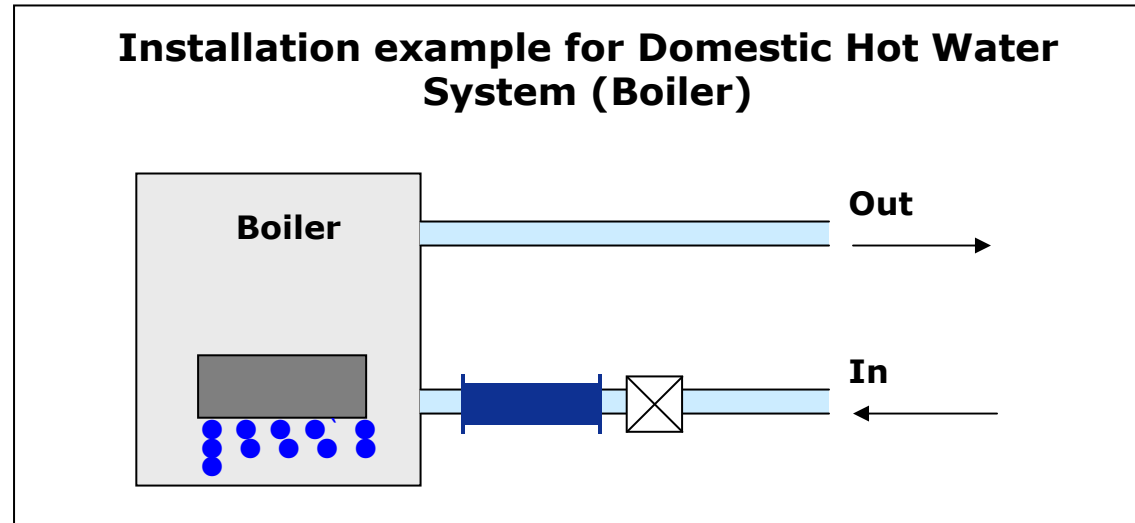
## ◆ Non Scolor Type

Product Number	Pipe Size
NS-13	13A
NS-20	20A
NS-25	25A
NS-30	30A - 32A
NS-40	40A
NS-50	50A
NS-65	65A
NS-75	75A
NS-100	100A
NS-125	125A
NS-150	150A
NS-200	200A

- Non Scolor type should be selected according to pipe size.
- NS-50 and smaller type is screw mount type and NS-65 and larger type is flange type.
- Non Scolor A is installed on outer pipe.

## ◆ Example of Installation

 : Non Scolor A    
  : Non Scolor B    
 ← : Water flow direction



- Place of installation in case of circulation system
  - Incoming line of system to prevent scale.
  - After interflow of refill water
  - Outgoing line of pump