

# **INSTRUCTION MANUAL**

*for*

Vertical Pipe Band

**PIPELOCK TK**

**INABA DENKO™**

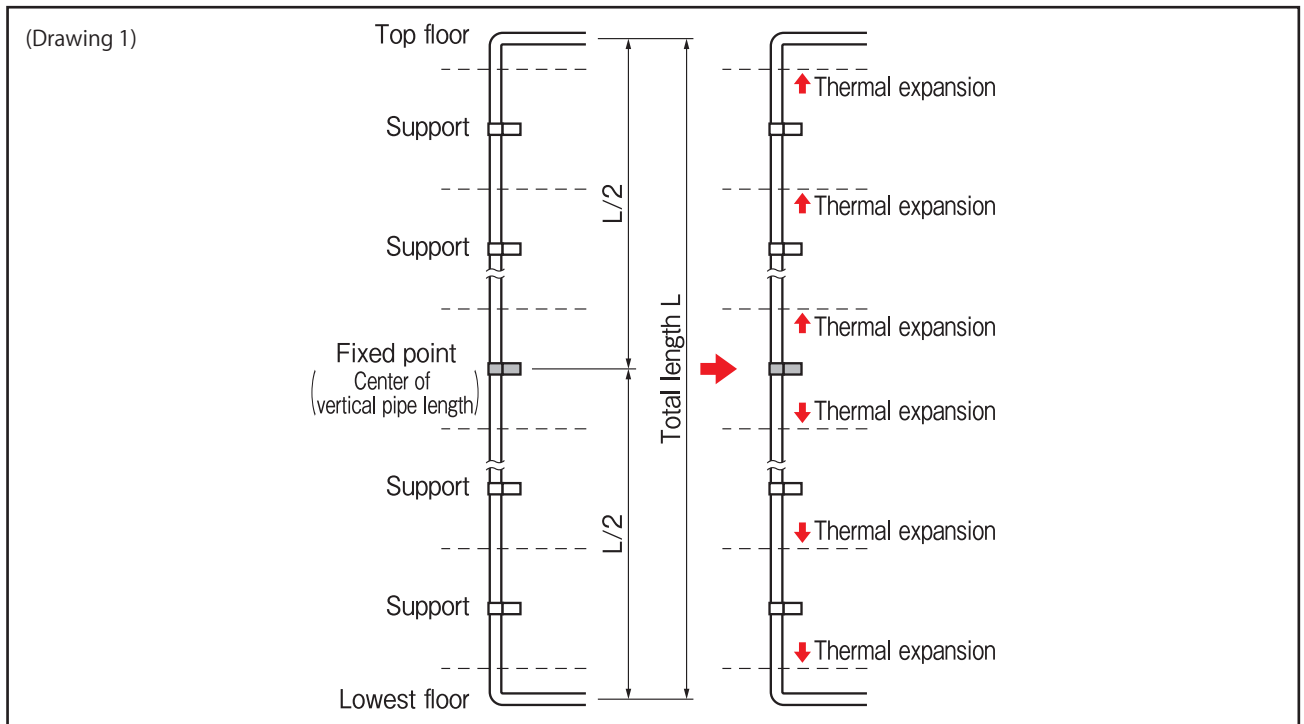
# Installation Procedure

1

## Determine PIPELOCK Installation Position

Set a fixed point of PIPELOCK in a center of vertical pipe length. The central fixed point acts as a fulcrum to direct thermal expansion and contraction upwards and downwards, supporting weight of copper pipe and reducing load on elbow at lowest floor at 50%.

**Caution** ● Use on vertical risers 50 meters or less.  
To use on vertical risers over 50 meters, contact INABA.



2

## Take Out Insulation

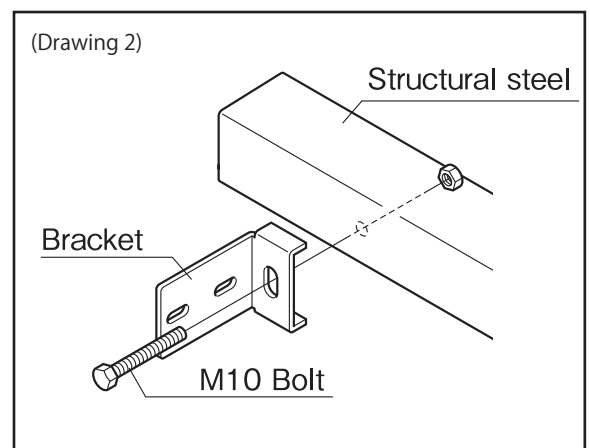
To braze the pipe with pipe support ferrule, peel off the insulation around the mounted section.

3

## Install Bracket

Attach bracket on structural steel.  
(Use M10 bolt and nut.)

To install bracket on structural steel, design the application with weight of vertical pipe system components. In the case of using the Direct Mount Bracket (TK-K) for the wall, please put it on the wall with full intensity.

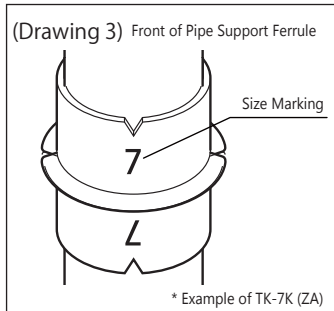


# 4

## Install Pipe Support Ferrule

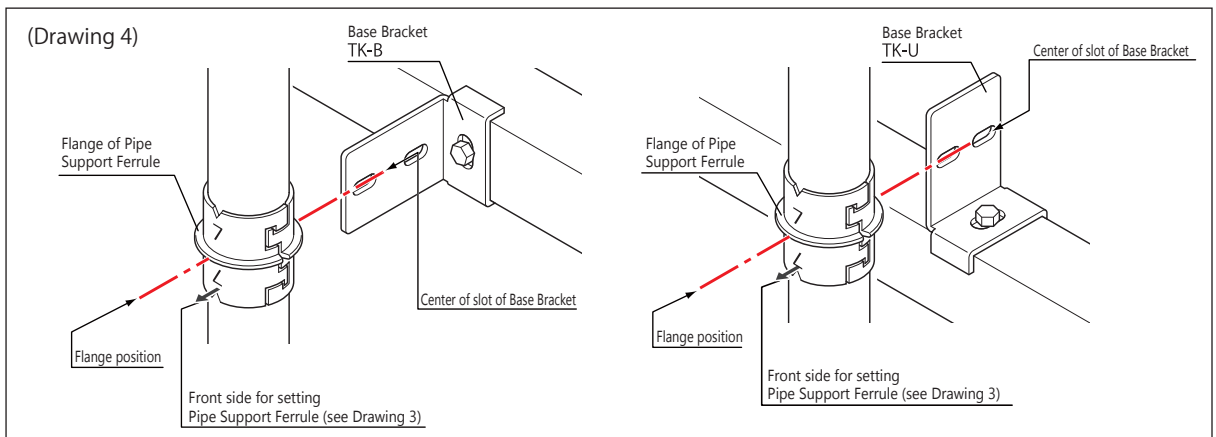
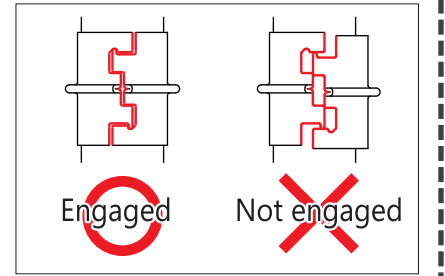
### 1 Positioning and set up of Pipe Support

Set the size marking point in the front of operator (Drawing 3) and fix on the pipe positioning the flange of Pipe Support Ferrule on the same line to the center of slot of Base Bracket. (Drawing 4)



#### Caution

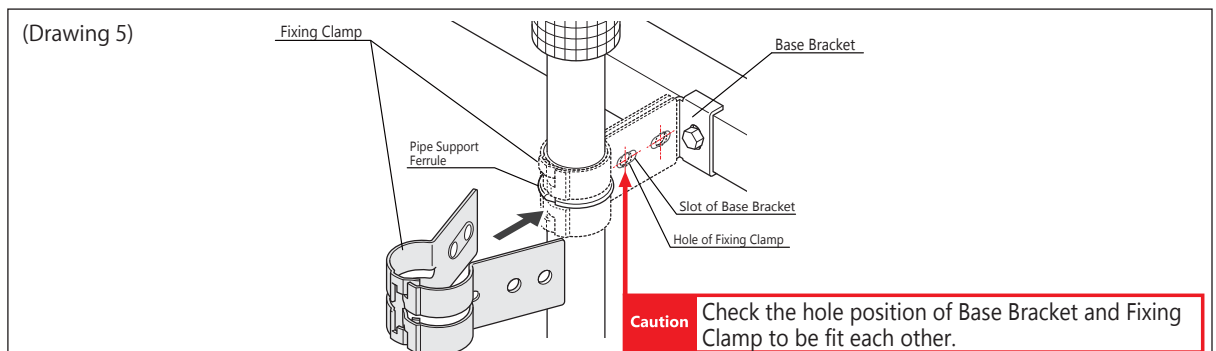
- When setting Pipe Support Ferrule on pipe, make sure if the hook part shall be engaged each other. Otherwise, Fixing Clamp can not be attached.



- Caution** ● Flange of Pipe Support Ferrule and the center of slot of Base Bracket shall be positioned on the same line, otherwise Fixing Clamp can not be attached.

### 2 Check for mounting position of Pipe Support Ferrule

Check by the following method if the mounting position of Pipe Support Ferrule is correct;  
Apply the Fixing Clamp onto the Pipe Support temporarily and check hole position of Fixing Clamp and Base Bracket. (Drawing 5)  
If the holes do not fit each other, it can not be fixed.



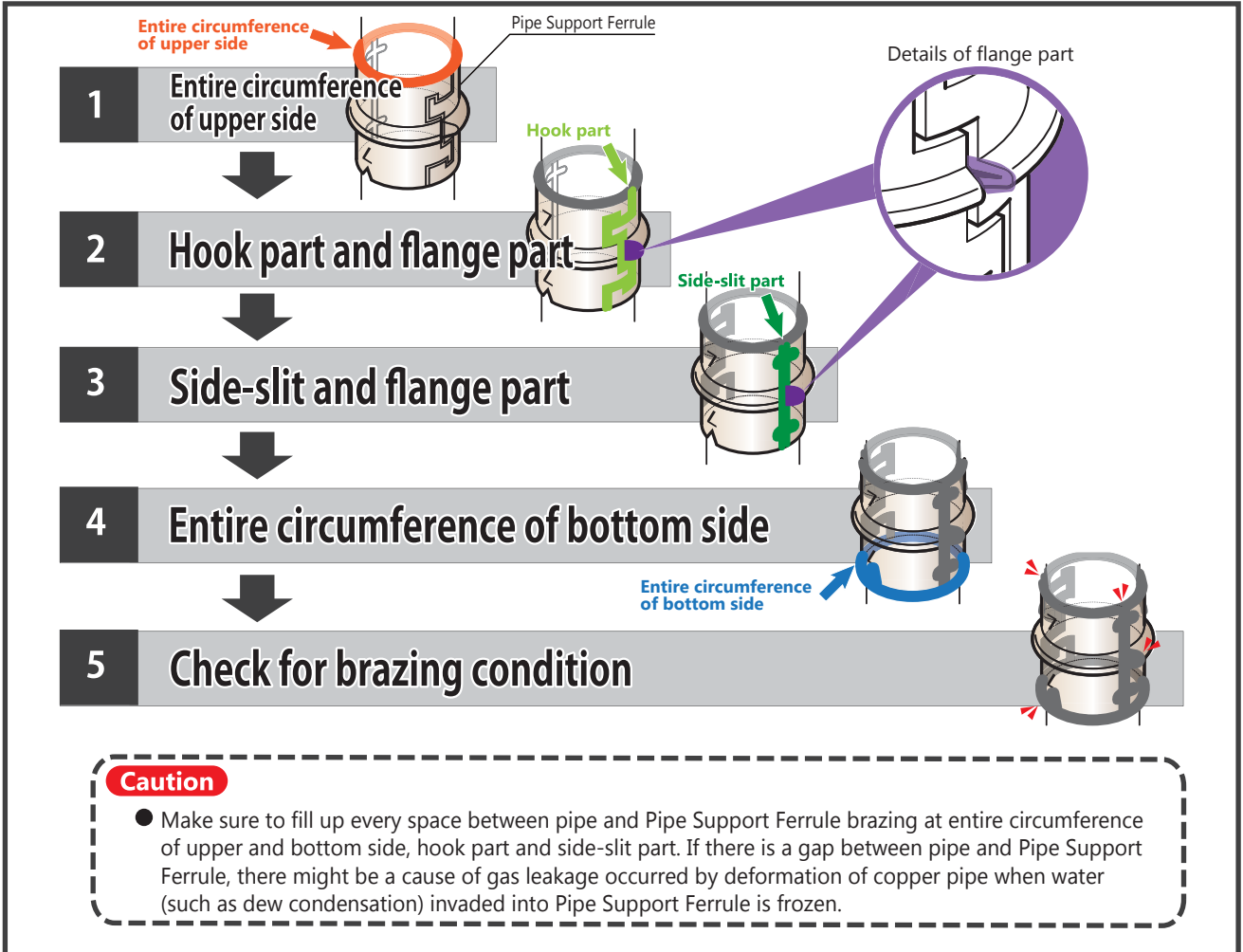
Remove Fixing Clamp after the check of mounting position of Pipe Support Ferrule.

# 5

## Install Fixing Clamp

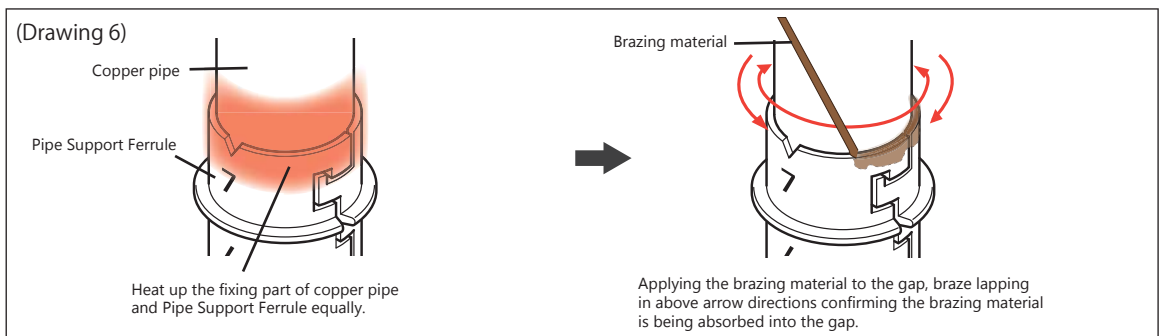
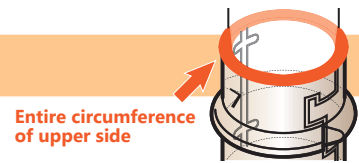
**Caution** Never do brazing when internal pressure is applied inside of pipe because there is a dangerous risk of an explosion of pipe.

According to the following procedure, braze Pipe Support Ferrule set on pipe using hard solder;



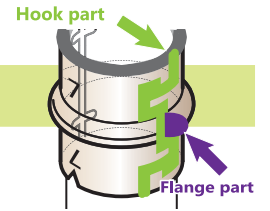
### 1 Brazing at entire circumference of upper side

Braze entire circumference of upper side. (Drawing 6)

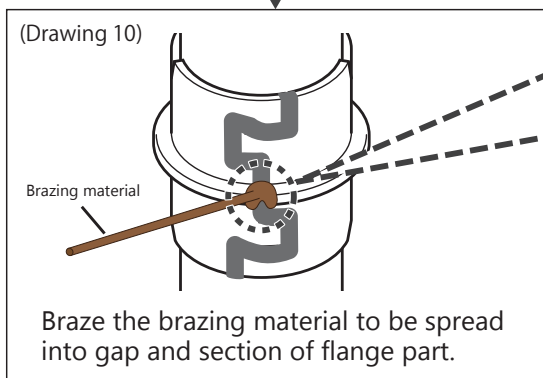
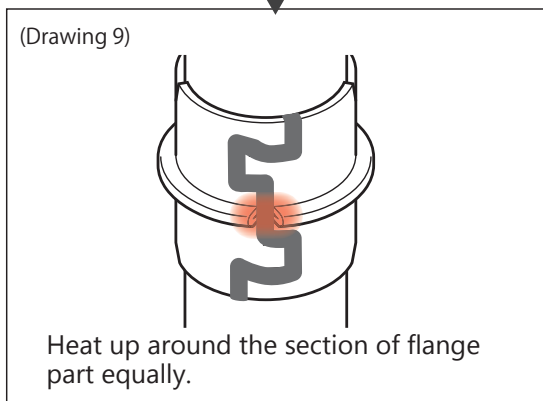
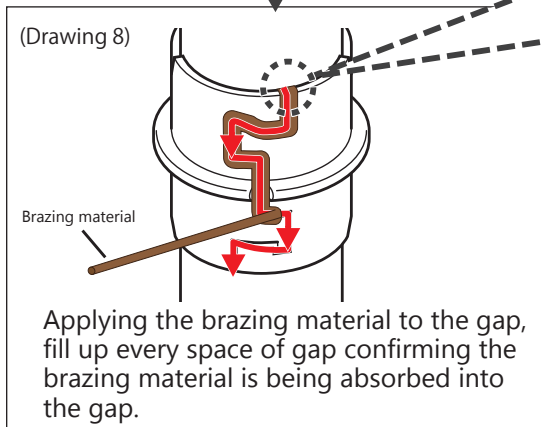
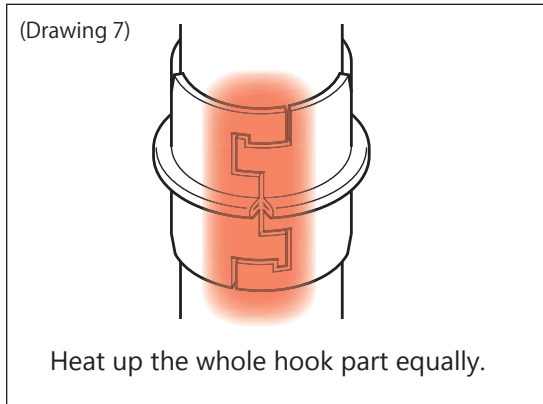


## 2

## Brazing at hook part and flange part

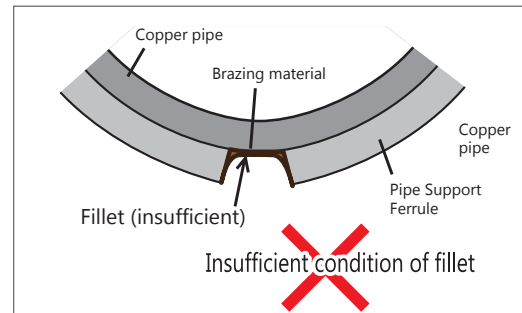
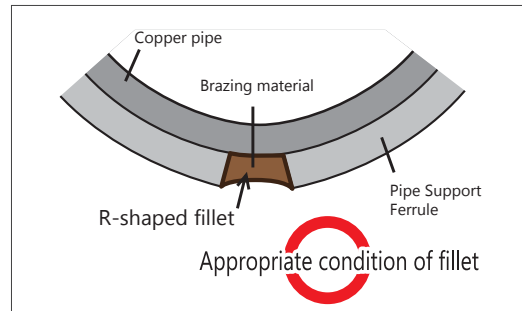


Braze hook part and flange part. (Drawing 7 - 10)



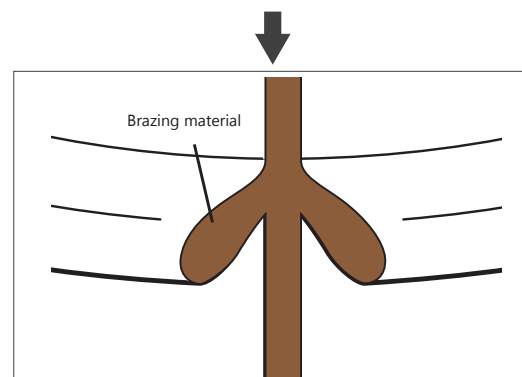
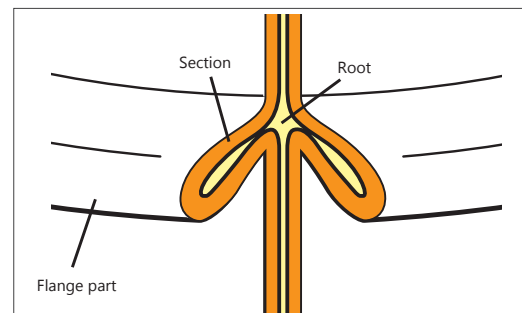
### Caution

- Make sure if R-shaped fillet is formed at the section.

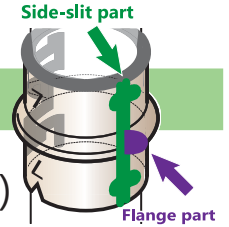


### Caution

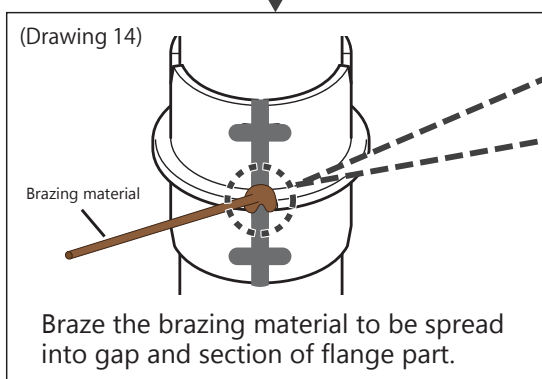
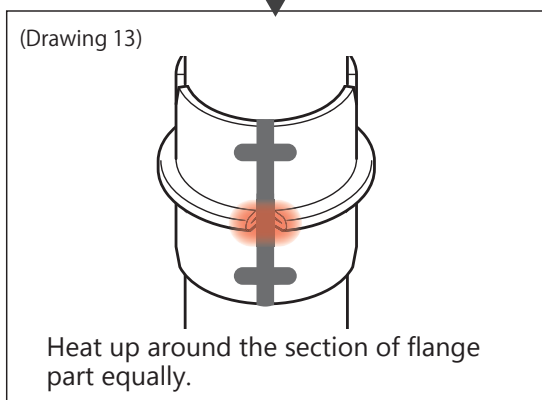
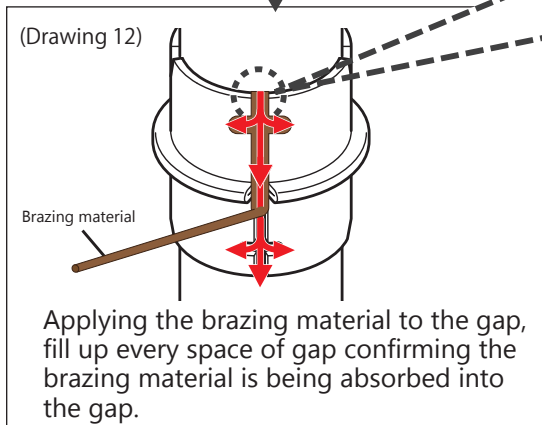
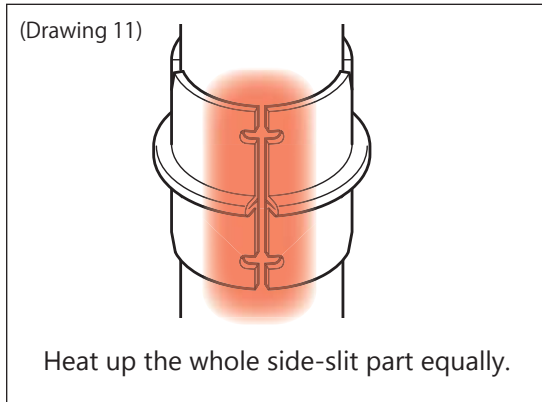
- Fill up the section and the root of flange part.



### 3 Brazing at side-slit part and flange part

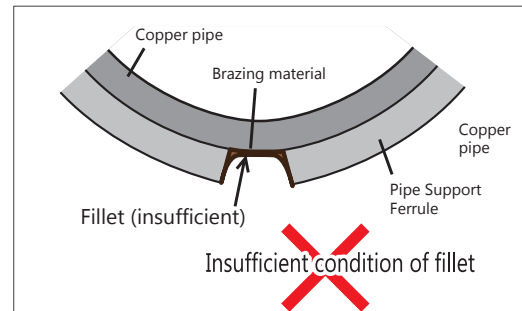
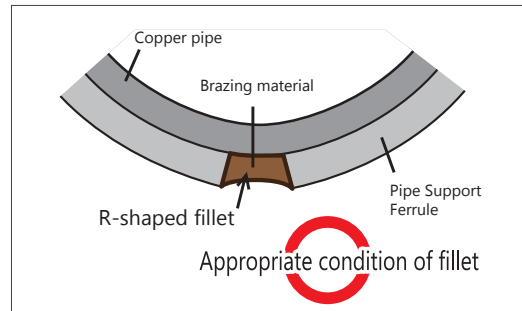


Braze slide-slit part and flange part. (Drawing 11 - 14)



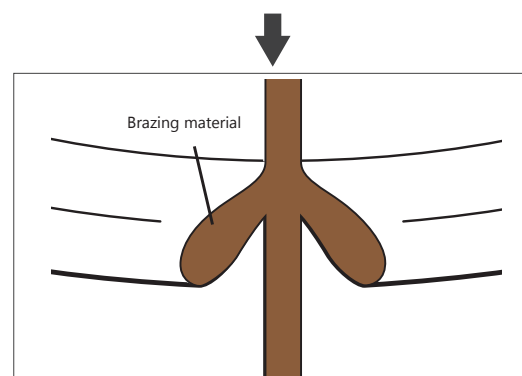
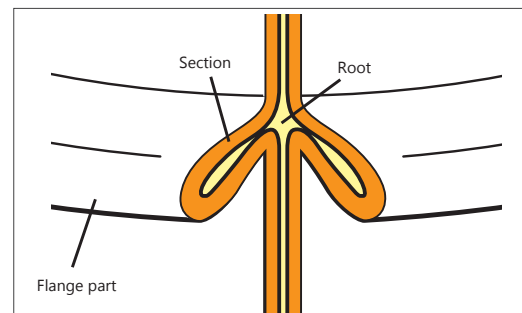
#### Caution

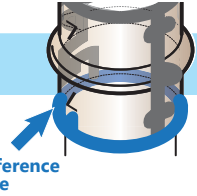
- Make sure if R-shaped fillet is formed at the section.



#### Caution

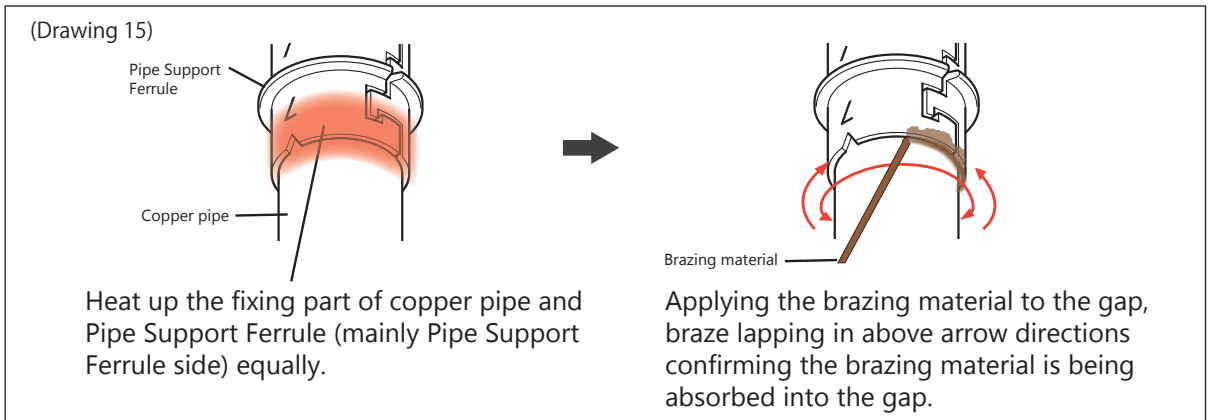
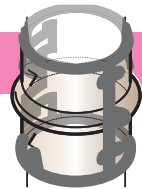
- Fill up the section and the root of flange part.



**4****Brazing at entire circumference of bottom side**

Braze entire circumference of bottom side.  
(Drawing 15)

Entire circumference  
of bottom side

**5****Check for brazing condition**

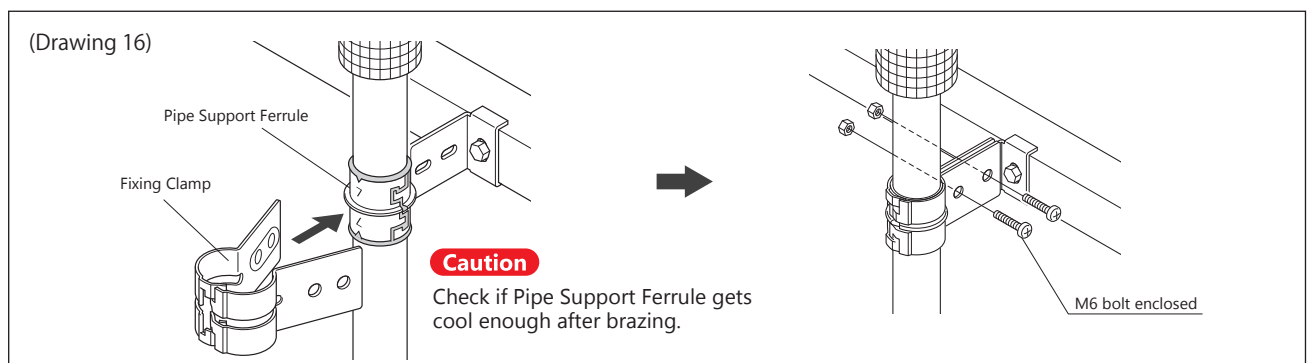
Check brazing condition again after completion of brazing work.

**Caution**

- Filled brazing material may sometimes become lean (thinner) while brazing other part. In this case, braze there again.
- Check if there are any point where brazing material is absorbed (brazing material is absorbed between pipe and Pipe Support Ferrule and become lean by remaining heat).
- For prevention from burn, cool down the brazing part by wet towel etc. after brazing work.

**6****Braze Pipe Support Ferrule**

Attach Fixing Clamp after brazed Pipe Support Ferrule gets cool enough. (Drawing 16)

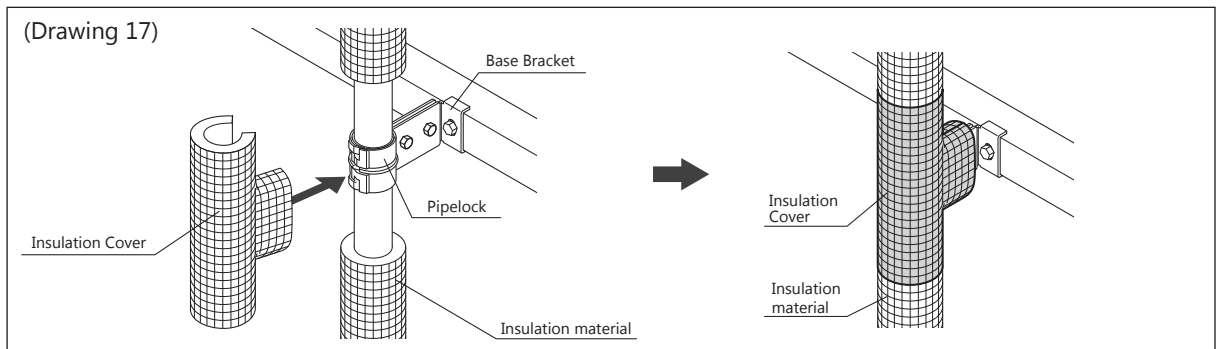
**Caution**

- Painting of Fixing Clamp may be melt by the remaining heat of brazed Pipe Support Ferrule. Please make sure to install Fixing Clamp after Pipe Support Ferrule is enough cooled.

# 7

## Fit Insulation Cover (dew prevention treatment)

- 1 For dew prevention treatment, fit Insulation Cover (INABA Item No. : TK-SH, TK-DH) at the installation point of Pipe Lock. (Drawing 17)



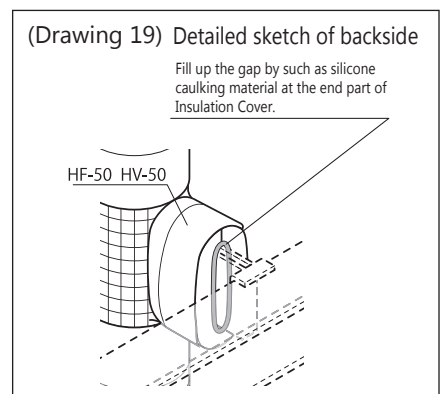
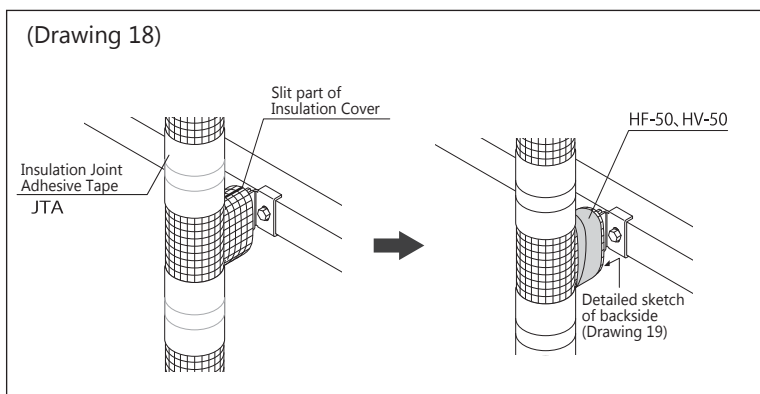
### Caution

- Remove the dust and wipe up the dirt at connection part between Insulation Cover and insulation material.

- 2 Wrap a layer of Insulation Joint Adhesive Tape (INABA Item No. : JTA-100-I) around insulation in circumference direction. Always set its center placed fiberglass at the insulation joint and overlap each other at least 10mm. (Drawing 18)

For prevention from opening the gap space between Pipelock and insulation, wind Adhesive Tape (INABA Item No. : HF-50, HV-50) at slit part of Insulation Cover on Base Bracket.

Besides, fill up the gap by such as silicone caulking material at the end part of Insulation Cover for prevention from inflow of the air. (Drawing 19)



# INABA DENKO™

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