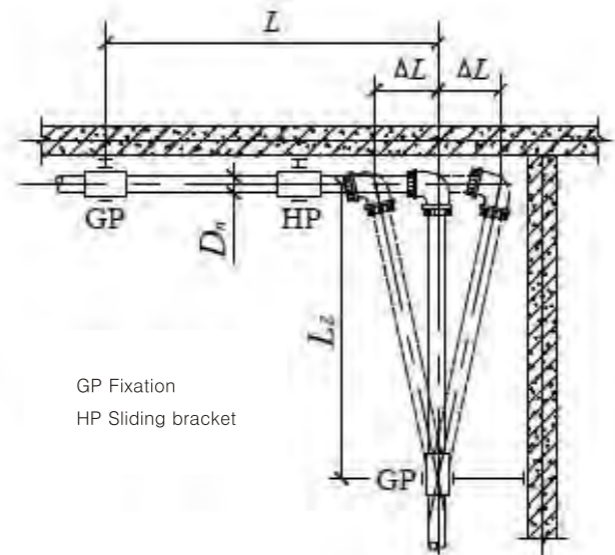


Fig (4)



When using a fixed support to limit pipes deformation, it should review the supporting force, and the supporting force should be bigger than the pipe swelling force caused by temperature changing.
the swelling force of Unit length straight pipe can be calculated by formula below:

Formula (4) : $F_p = \sigma \times A$

Formula (5) : $\sigma = a \times E \times \Delta t \times 10^{-3}$

Where: F_p —the swelling force of Unit length straight pipe (N); σ — thermal stress (N / mm)
 A —the cross-sectional area of the pipe steel strip layer (mm²);
 Δt — the differentials of average temperature and installation temperature (°C)
 E — pipe modulus of elasticity, based on pipe-layer, taking value for 206×10^3 (N / mm)

© Directly Buried Under The Ground Floor, Under The Ground Surface Or Inside The Wall, It Is Unnecessary To Consider Longitudinal Extension Compensation.

Pipeline hydraulic calculation

© The loss calculation of pipe water head shall be subject to the following provisions:
the water head loss of unit length should be calculated by the formula:

Formula (6) :

$$i = 105 C_h^{-1.85} \times d_j^{-4.87} \times q_g^{1.85}$$

formula: i — the head loss of unit length (KPa / m); C_h — Haicheng, William coefficient, taking 140
 d_j — pipe inner diameter (m); q_g — design flow (m / s)

Formula (7) : $i = 0.0112 d_j^{-4.87} \times q_g^{1.85}$

the loss calculation of pipe water head shall be subject to the following provisions:
the water head loss of unit length should be calculated by the formula:

© Inner Dia of Pipe shall be determined as the calculation :

Formula (8) :

$$d_j = d_n - 2e$$

In Formula : d_j ---- inner dia of pipe (mm) (Value in detail refer to From C);
 d_n ----out dia of pipe (mm) ; e ---- the thickness of pipe(mm)

From (C) the calculation of inner dia of Steel / plastic composite pipe (mm)

Specification(mm)	50	63	75	90	110	160
Cross-section of steel / plastic Pipe (m²)	40.3	50.4	63.5	77.5	96.6	141

© When it comes to hydraulic calculation, selected water temperature and the temperature of the hydraulic calculation table is not consistent, should check the value i multiplied K_1 of the water temperature correction coefficient to amend . Water temperature correction coefficient in Table D

Form (D) Temperature modified coefficient K_1 value

Waters temperature (°C)	10	20	30	40
K_1	1	0.943	0.895	0.856

© Flow rate of water inside the pipe should not be greater than 2.0m / s, Generally recommended 1.0 ~ 1.5 m / s.

Construction And Installation

General Provisions

© Shall meet the following conditions before the pipeline installation:

1. Construction drawings and other technical documentation is complete, and the drawings have been carried out technical tests, to meet the construction requirements;
2. the construction program, construction technology, materials and equipments supply can guarantee the normal construction;
3. construction workers should be subject to technical training of connecting pairs of hot-melt installation of steel-plastic composite pressure pipe.
4. construction sites and construction of water, electricity, materials, storage and temporary facilities can meet the construction needs.

© Supply of the pipe, and pipe fittings should comply with the relevant standards, together with product specifications and quality certification, Do not use any pipes and pipe fittings which shows signs of damage.

© construction site should be clean, clear rubbish, debris, silt, grease; the construction process should be to prevent the pipe and pipe fittings from being polluted; Face opening of pipes shall promptly carry out sealing treatment and block the exposure during the installation of piping system

Storage

© In the transportation, pipes and fittings should be handled with care to avoid oil spills, and also avoiding throwing , rolling , dragging , contacting with sharp objects to touch.

© Pipes and fittings should be stored in well-ventilated, temperature does not exceed 40 °C , within the Treasury or the awning , shall not be open-air storage, to prevent direct sunlight; attention to fire safety . All from the heat source shall not be less than 1m.

© Pipe should be stacked on a flat level pad material, the stacking height shall not exceed 1.5m.