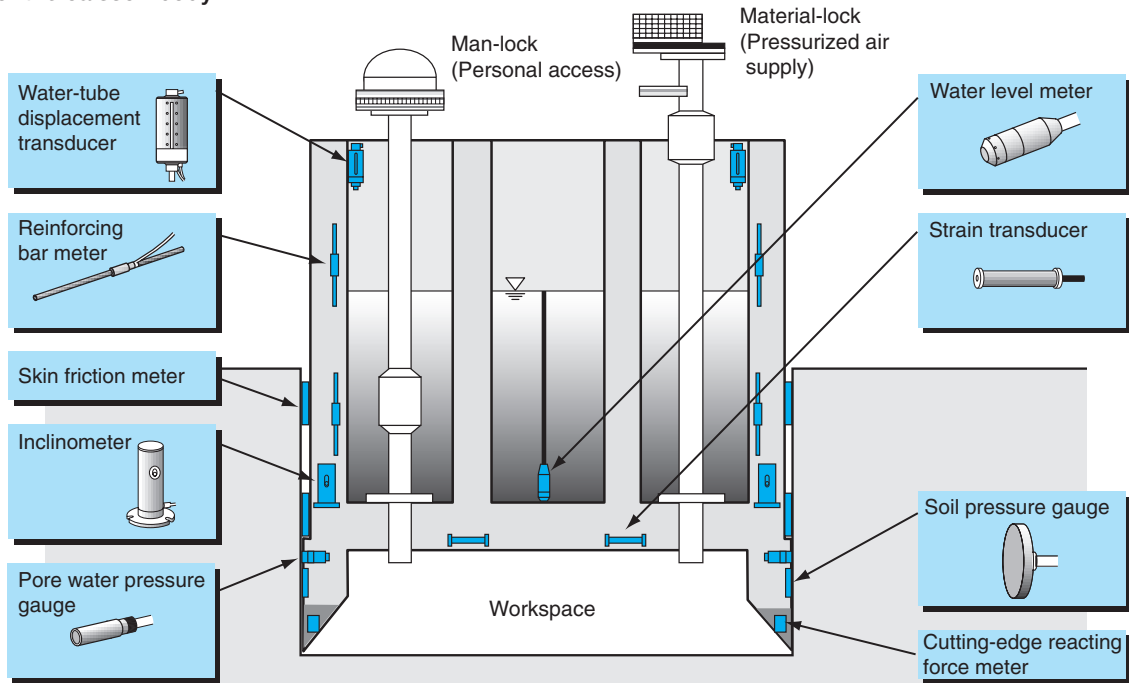


2 Caisson measurement

When installing a caisson, the following conditions must be monitored and controlled to gather data on the degree of sinking of the caisson body:



A list of Measuring Instruments

Measurement items	Instruments	Type	Description
Cutting-edge reacting force	Cutting-edge reacting force meter	KKB-PA	Finds reaction force by embedding a load cell in the cutting edge
Soil pressure on wall	Soil pressure gauge for wall surface	KDB-PA KDD-PA	Hollows out in a box shape on the side face of a caisson and fixed thereto.
Skin-friction	Skin-friction meter	KKA-PA	Hollows out in a box shape on the side face of a caisson and fixed thereto.
Pore pressure of the surroundings	Pore pressure gauge	KPA-PA KPC-PA	Hollows out in a box shape on the side face of a caisson and fixed thereto.
Behavior within the caisson	Re-inforcingbar meter Strain transducer Stress meter	KSA-A, KSAT-A, KM-B KM-BT, Other maker	Pressure-welds to a re-bar inside a caisson wall to measure stress. Measures strain inside the wall. Fix a stress meter inside to measure an effective force of a concrete.
Inclination	Inclinometer	KB-AB, KB-AC	Fixes it to a point of interest to find the attitude of a caisson from tilt angles of X and Y components.
Subsidence of caisson	Water-tube displacement transducer	KWL-B KWL-E	A reference water tank is fixed inside the caisson and relative sinking amount is found from the transducers connected via water tube.
	Winding type displacement transducer	DP-E	The sinking amount of a caisson to the ground level is measured.
Atmospheric pressure within the caisson	Pore pressure gauge	KPA-PA KPC-PA	One method is the use of absolute pressure and another the back pressure of a relative pressure transducer made open to atmospheric pressure outside the caisson.
Weight of water	Water level meter	KW-C	Found by measuring water level inside the caisson.
Settlement of surrounding ground	In-place settlement meter	KLA-A, NKLA-A KLC-A	The sinking amount of a settlement plate placed on the ground level to a fixed point which is an anchor of measuring rod.
Temperature	Thermocouple thermometer	T, KT-A	Measures temperature inside and outside the caisson.

Measuring System Block Diagram

