CIVIL ENGINEERING LABORATORY

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PERMEABILITY TEST IN ACCORDANCE WITH DIN 1048

Specimen From	:	บริษัท สิงห์สุวรรณ จำกัด
Project Name	:	ถังเก็บน้ำใส สถานีสูบจ่ายน้ำลาดพร้าว
Type of Specimen	:	Cube 150x150x150 mm
Mix Code	:	MW4017WPF3CR
Date of Testing	:	8/7/2566

Specimen No.	Weight of specimen (kg)	Depth of water permeated, d (mm)	Volume of permeable pore space, v (%)	Coefficient of water permeability, Kp ($x10^{-13}$ m/sec)
1	8.01	1.6	3.58	3.54
2	8.02	2.1	3.59	6.10
3	8.04	3.8	3.58	19.97
Average				9.87

Remarks : Depth of water penetration was first measured as per DIN1048 and then the coefficient of water permeability was determined as per ASTM C642.

The coefficient of water permeability (Kp) is calculated as follows;

$$K_p = \frac{d^2 v}{2TH}$$

where Kp = coefficient of permeability by penetration method (m/sec)

d = depth of penetration (m)

T = time to penetrate depth d (sec); [tested for 72 hours = 259,200 sec]

H = pressure head (m); [5 bar = 50 m]

v = volume of permeable pore space (use fraction in calculation);

Tested by : (Poopatai Chumpol)

Checked by : (Manote Sappakittipakorn)

Department Head : (Nuttawut Thanasisathit)

Remarks : 1. The test results are good only for those specimens tested.

2. This certificate of the test results is not valid unless signed and sealed.