

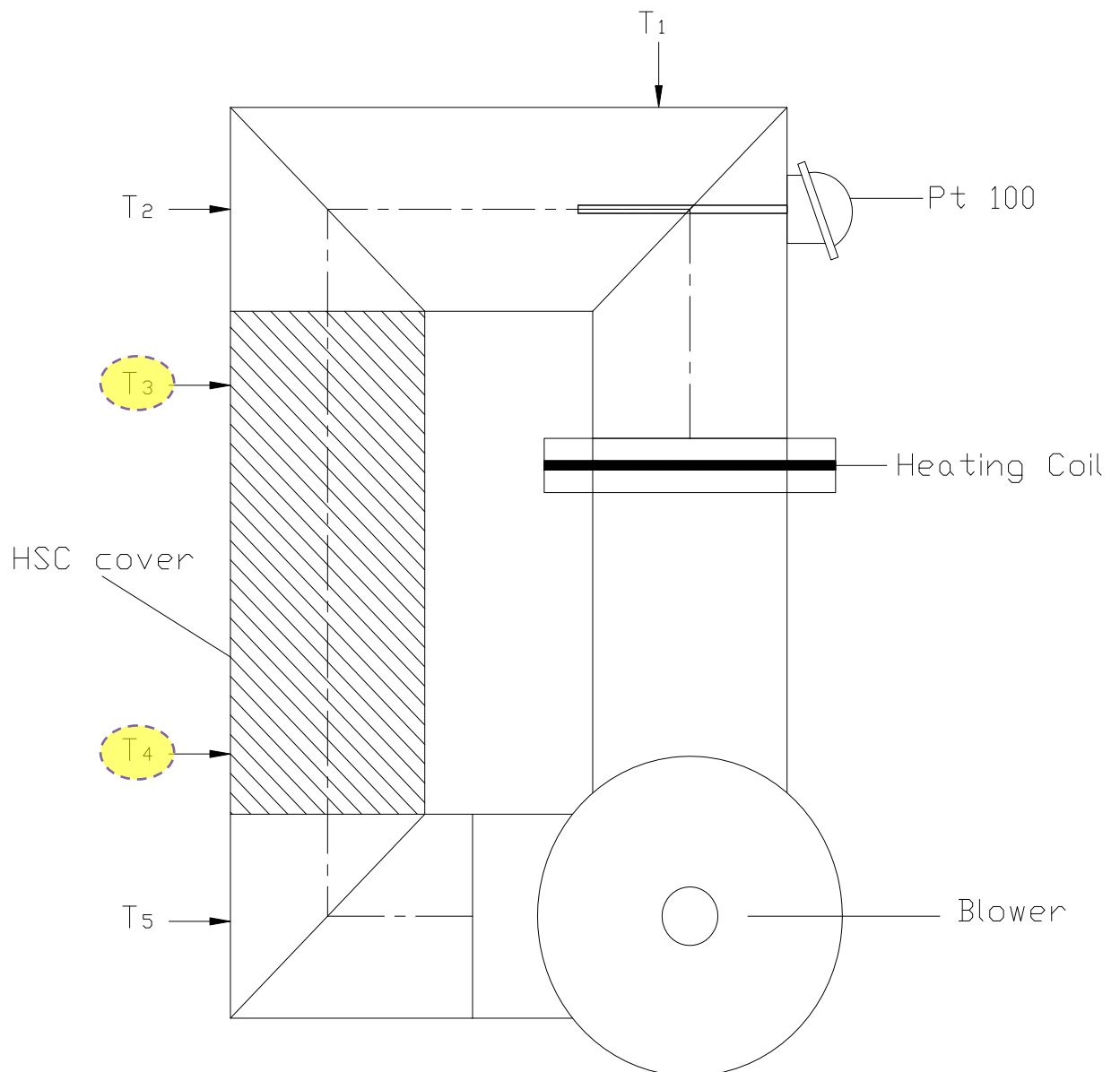
## Isolation Coating (HSC) Preliminary Test Report

### (1) Test Setup:

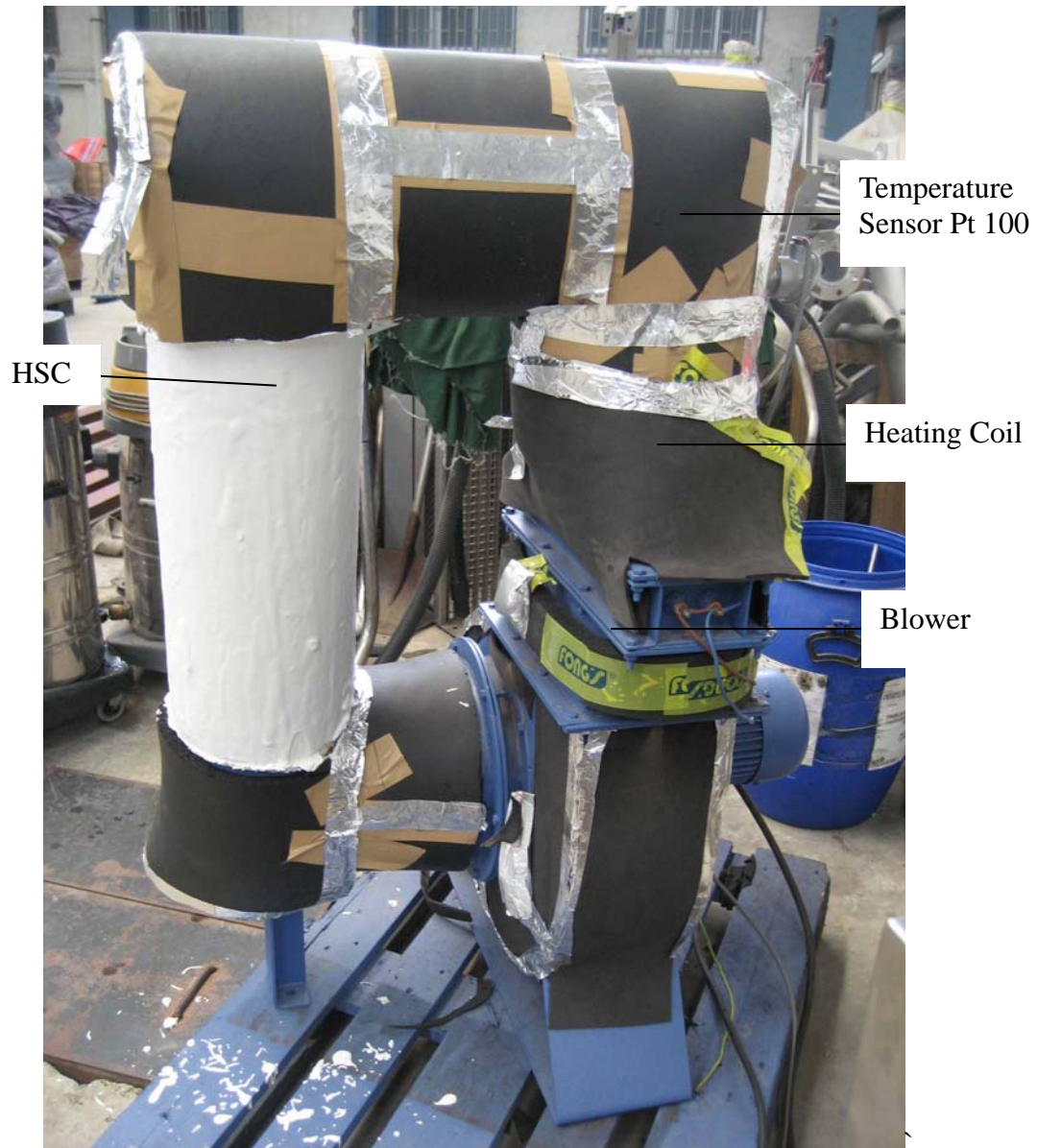
The test is processed on a closed system as shown in Fig. 1 & Fig. 2. The application can be divided into 4 main parts.

- (a) Temperature Sensor (Pt 100);
- (b) Heating Element (heating coil);
- (c) Blower;
- (d) Surface coated with HSC

**Fig. 1 The schematic diagram of the test setup**



**Fig. 2 The photo of the test setup with 2 gallon coating.**



**(2) Test description:**

The test is done by comparing the difference between the system internal temperature and the surface temperature of the pipe which is coated with HSC. The HSC is coated on the test surface by increment in every 1 gallon per square meter (10.76 square feet) or 149 mils WFT = 120 mils DFT.

The following results are recorded by using 1 gallon thickness and 2 gallon thickness. **T3 & T4 are the position coated with HSC.**

Table 1. Test results of using 1 gallon HSC thickness.

Position 位置	Temperature 溫度 (°C)																
	Running Time 運行時間 (minutes 分鐘)																
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
T1	32.0	32.0	33.0	36.0	37.0	39.0	40.0	41.0	42.0	43.0	44.0	45.0	42.0	42.0	44.0	44.0	44.0
T2	32.0	32.0	33.0	35.0	37.0	38.0	39.0	39.0	41.0	42.0	43.0	44.0	41.0	41.0	44.0	44.0	44.0
T3	30.0	48.0	63.0	71.0	77.0	87.0	96.0	98.0	100.0	102.0	107.0	109.0	108.0	110.0	112.0	113.0	113.0
T4	30.0	46.0	60.0	66.0	75.0	83.0	87.0	94.0	95.0	101.0	101.0	103.0	102.0	104.0	105.0	104.0	104.0
T5	30.0	32.0	33.0	34.0	35.0	37.0	38.0	39.0	41.0	42.0	41.0	41.0	41.0	40.0	41.0	41.0	41.0
Pt-100	28.0	54.1	73.0	87.3	96.2	105.6	114.1	120.0	124.5	129.2	132.1	135.0	137.4	138.7	139.8	140.5	140.6

Table 2. Test results of using 2 gallon HSC thickness.

Position 位置	Temperature 溫度 (°C)																
	Running Time 運行時間 (minutes 分鐘)																
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
T1	29.0	30.0	32.0	34.0	36.0	38.0	40.0	40.0	41.0	41.0	41.0	41.0	42.0	43.0	43.0	43.0	44.0
T2	29.0	30.0	32.0	33.0	36.0	37.0	38.0	40.0	40.0	40.0	39.0	41.0	41.0	41.0	43.0	42.0	43.0
T3	29.0	42.0	52.0	63.0	63.0	72.0	74.0	77.0	84.0	83.0	85.0	88.0	92.0	94.0	94.0	94.0	93.0
T4	29.0	38.0	48.0	58.0	60.0	66.0	71.0	73.0	77.0	81.0	81.0	78.0	84.0	84.0	84.0	84.0	84.0
T5	29.0	30.0	32.0	34.0	35.0	37.0	37.0	39.0	40.0	41.0	41.0	40.0	42.0	42.0	42.0	42.0	41.0
Pt-100	28.7	56.1	72.1	86.2	96.4	105.8	112.9	118.7	123.5	127.5	130.7	133.7	135.7	138.0	140.2	141.7	142.0

**(3) Test Results:**

According to the results, we found that there is about 35 °C degree isolated with 1 gallon thickness used and 55 °C degree isolated with 2 gallon thickness.

Coat 1 = 149 mils WFT / 120 mils DFT = 140.6 °C / 285 °F = 104 °C / 219 °F

Coat 2 = 298 mils WFT / 240 mils DFT = 142 °C / 287 °F = 84 °C / 183 °F