

KES

Demanded Specification of Cooling Water Supply System

KES G – B808

(EST.) 1988 – 12 – 17

Contents

1. Scope of Application
 2. Purpose
 3. System Investigation
 4. Calculation of Quantity of Cooling
Water Supply
 5. General Items
 6. Detail items
- Additional Rules

1. Scope of application

This standard shall prescribe building enlargement of P/T laboratory

2. Purpose

This standard shall prescribe conditions of standard design when constructing laboratory building as a method of confrontation condition on volume calculation of cooling water pump location when hereafter building enlargement of P/T laboratory and increased DYNAMO.

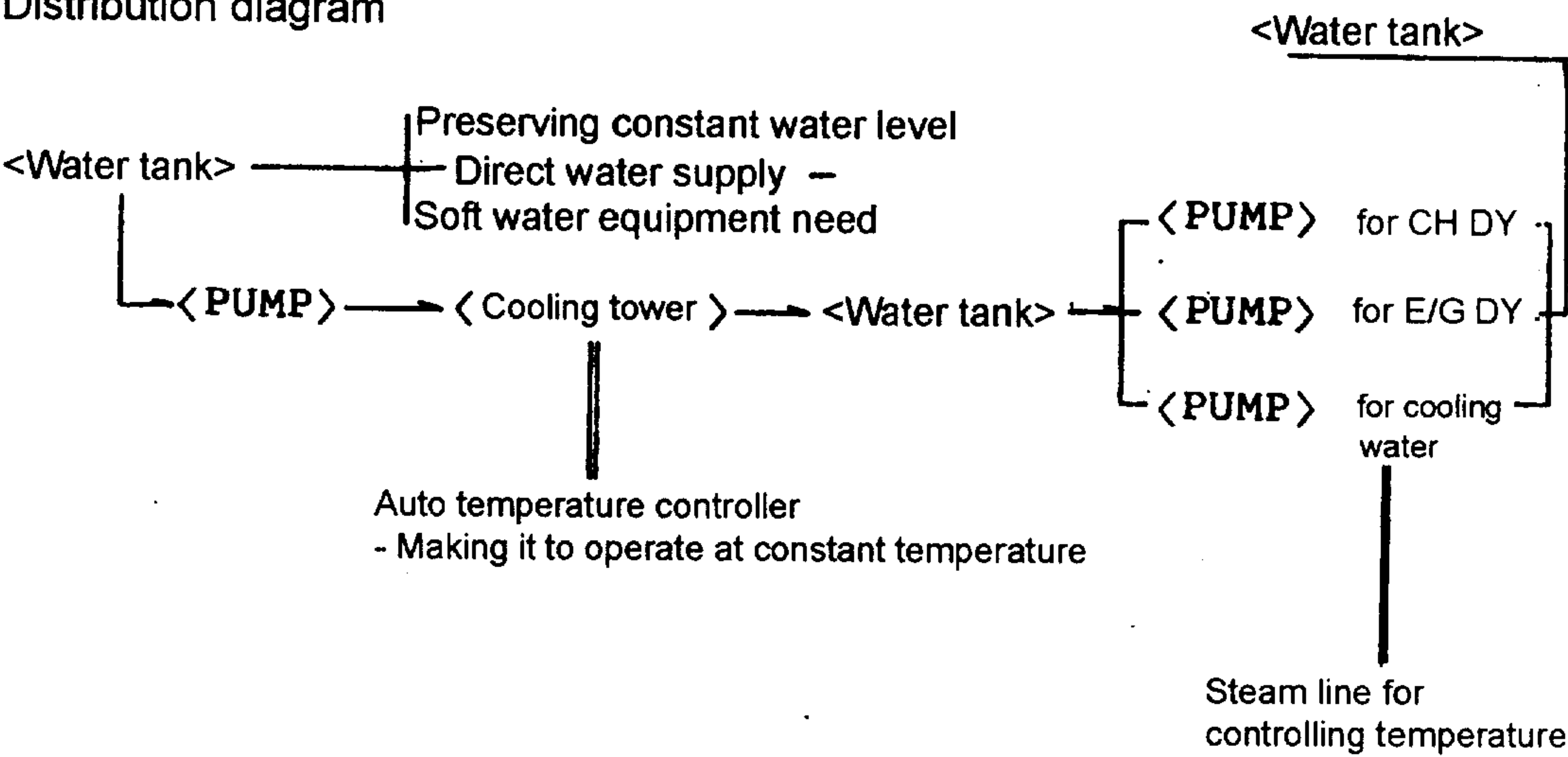
3. System investigation

3.1 summary

- (1) Existent cooling water tank and cooling tower are insufficient to use even block “D, E” because these are designed according to block “A, B, C”
(Refer to P/T experiment, lay-out)
* Existent using condition : Working ratio 60% (Winter time)
- (2) it is necessary to install cooling tower for air conditioning of EPA equipment
- (3) Using ENG cooling water and cooling water of CH. DY now in common, but it has bad effect upon abnormal state of CH. DY caused by pollution of oil, etc. after cooling ENG.

3.2 System investigation

(1) Distribution diagram



LAY-OUT OF LABORATORY BUILDING IN '89

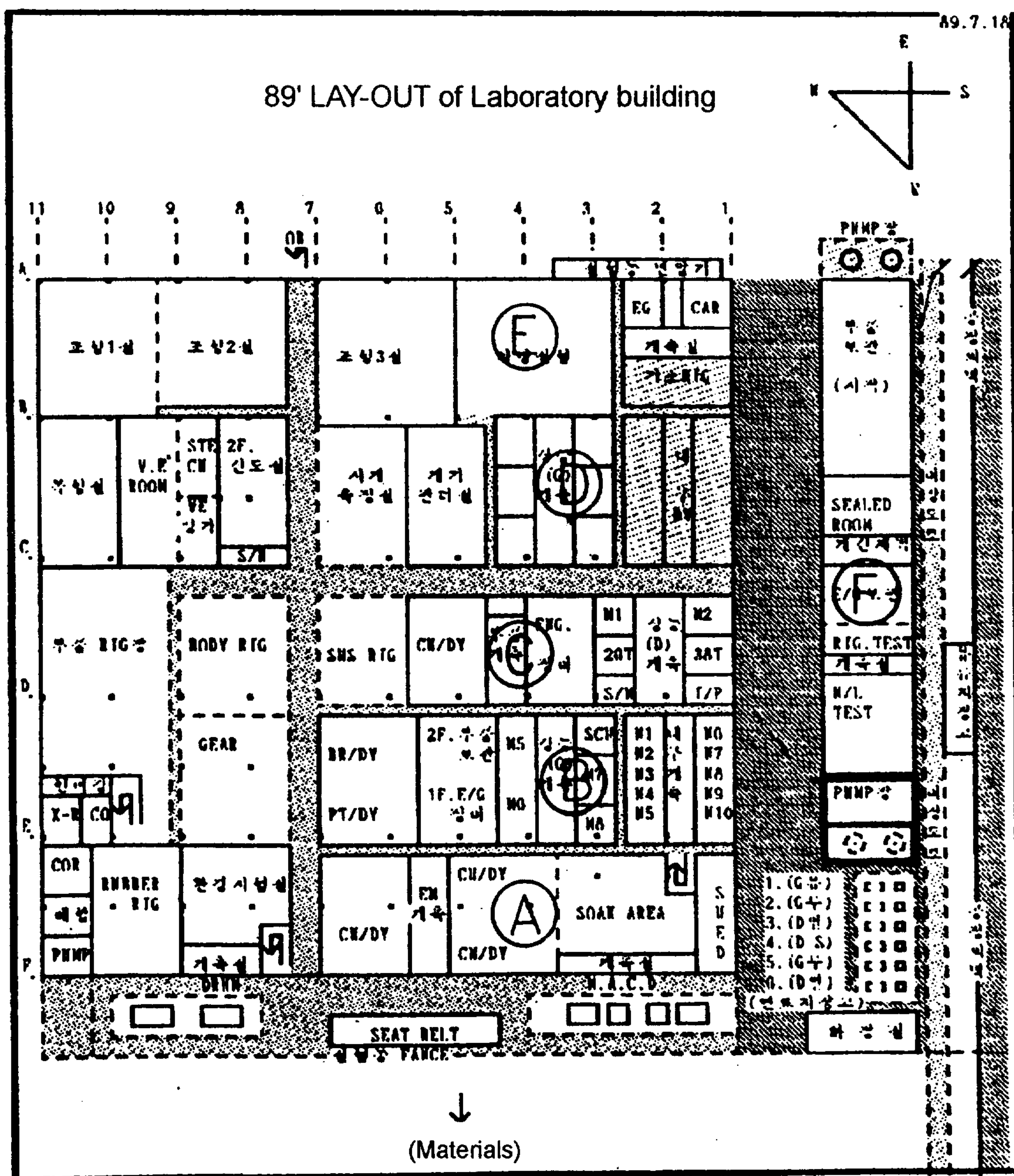


Figure 1 Lay-out of P/T laboratory building

4 . Calculation of cooling water supply quantity

Division		Quantity	DYNAMOMETER			ENG cooling water, tank heating equipment			ENG, Oil tank heating equipment			Fuel tank heating equipment			Remark
			Supply pressure kg/cm ²	Supply volume ℓ/min	Heating value Kcal/hr	Supply pressure kg/cm ²	Supply volume ℓ/min	Heating value Kcal/hr	Supply pressure kg/cm ²	Supply volume ℓ/min	Heating value Kcal/hr	Supply pressure kg/cm ²	Supply volume ℓ/min	Heating value Kcal/hr	
N1,N2,N4 (TWD 150)	150 KW (204 PS)	3	0.5 ~ 0.8	90×3 =270	129000 ×3 =378000	3	70×3 =210	200000 ×3 =600000	3	80×3 =240	40000 ×3 =120000	3	20×3 =60	3000 ×3 =9000	Calculation of load factor : 0.5 Tank heating equipment : 0.5 Air conditioning indicated by * Does not contained in sum total
N3 (TW 110)	110KW (150 PS)	1	0.5 ~ 0.8	90×1 =90	94500 ×1 =94500	3	70×1 =70	200000 ×1 =200000	3	80×1 =80	40000 ×1 =40000	3	20×1 =20	3000 ×1 =3000	
N5,N8,N10 (TWD 110)	110 KW (150 KW)	3	0.5 ~ 0.8	90×3 =270	94500 ×3 =283500	3	70×3 =210	200000 ×3 =600000	3	80×3 =240	40000 ×3 =120000	3	20×3 =60	3000 ×3 =9000	
N6,N7,N9 (TWD 220)	220 KW (300 PS)	3	0.5 ~ 0.8	120×3 =360	189200 ×3 =567600	3	70×3 =210	200000 ×3 =600000	3	80×3 =240	40000 ×3 =120000	3	20×3 =60	3000 ×3 =9000	
C1,C2 (CLAYTON CM, DY)	55 KW (75 PS)	2	3.5	30×2 =60	47250 ×2 =94500										
*MAD	150 KW (204 PS)	5	0.5 ~ 0.8	140×5 =700	12900 ×5 =645000										
No load Acceleration & Deceleration test		5				3	70×5 =350	40000 ×5 =200000	3	80×5 =400	10000 ×5 =50000	3	20×5 =100		
* EPA Air condition.															
* Precision measuring room-Air conditioning															
Sum total			1690 (0.5~0.8) 60 (3.5)				1050 (3)			1200 (3)			300 (8)		