



2냉연 PCM X-Ray의 영향 인자 및 핵심 인자의 상태 정보 수집과 분석 알고리즘을 개발하여 두께계측기에 대한 모니터링 강화와 중요 설비의 조기 안정화를 위한 능동형 PLC 장치 구축으로 생산 제품 품질을 확보한다.

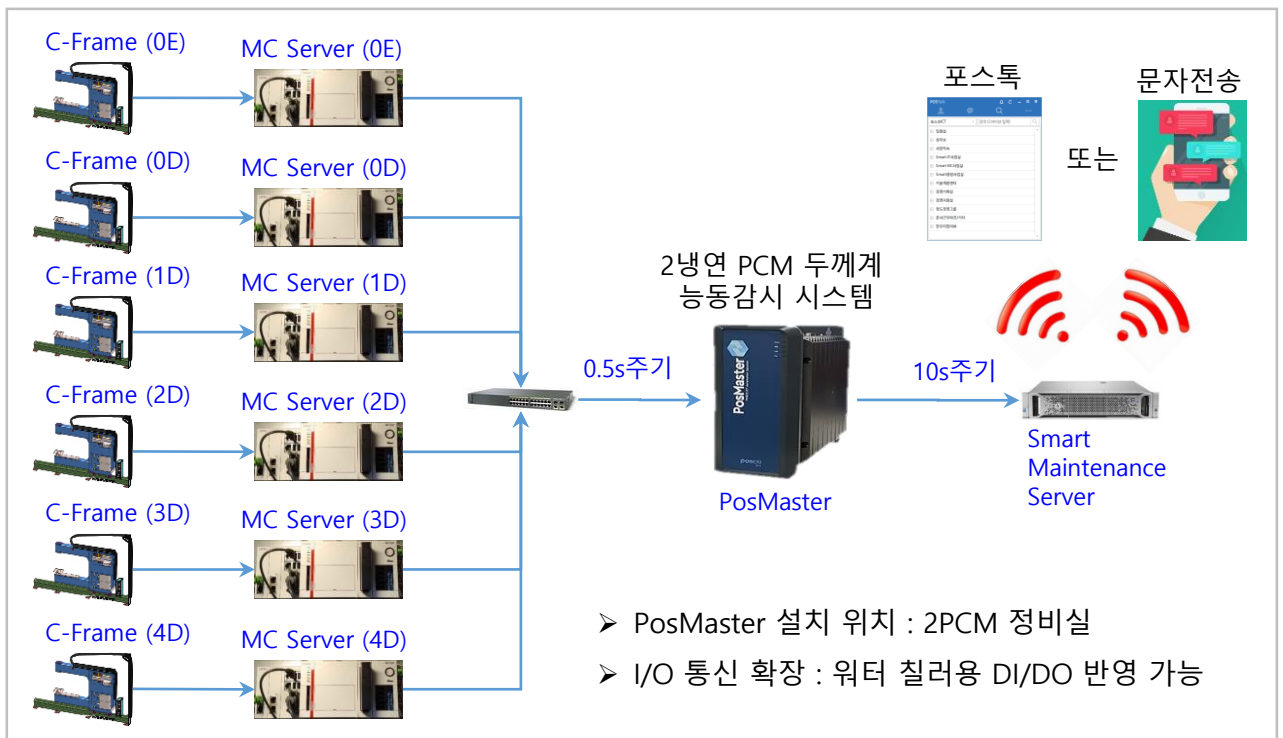
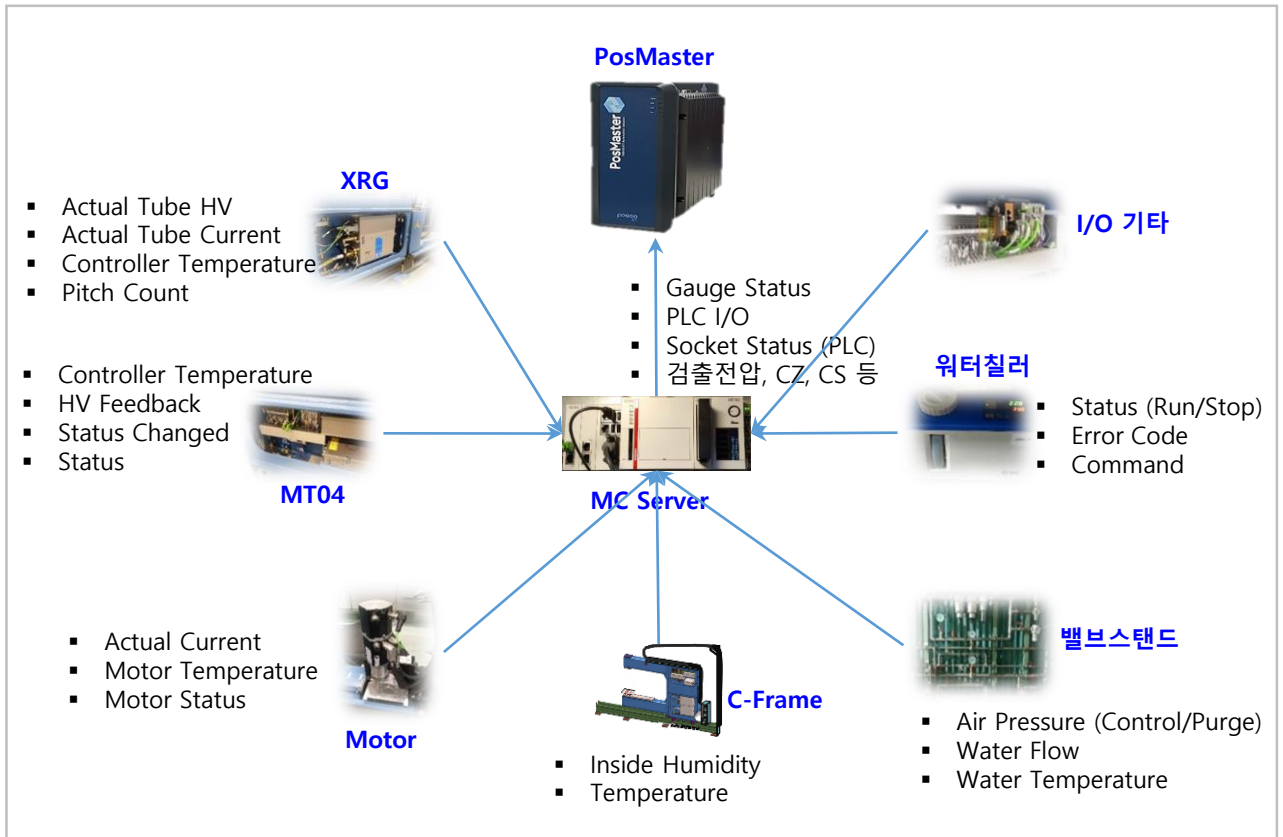
품명 : 2 PCM 두께계 Gathering Software Program

품목 Code : PMPLC-APP-SWGAT-100

# 2PCM 두께계 Data 분석 Solution

## 1. 시스템의 구성

### System Configuration

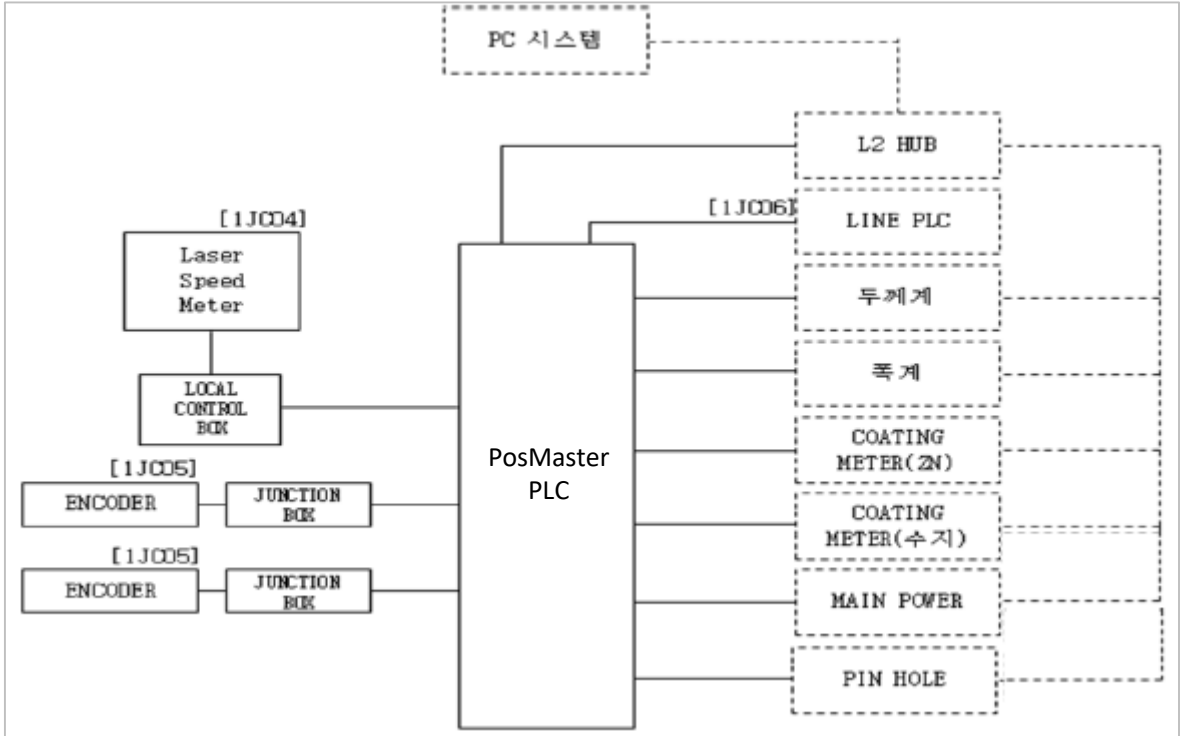


# 2PCM 두계계 Data 분석 Solution

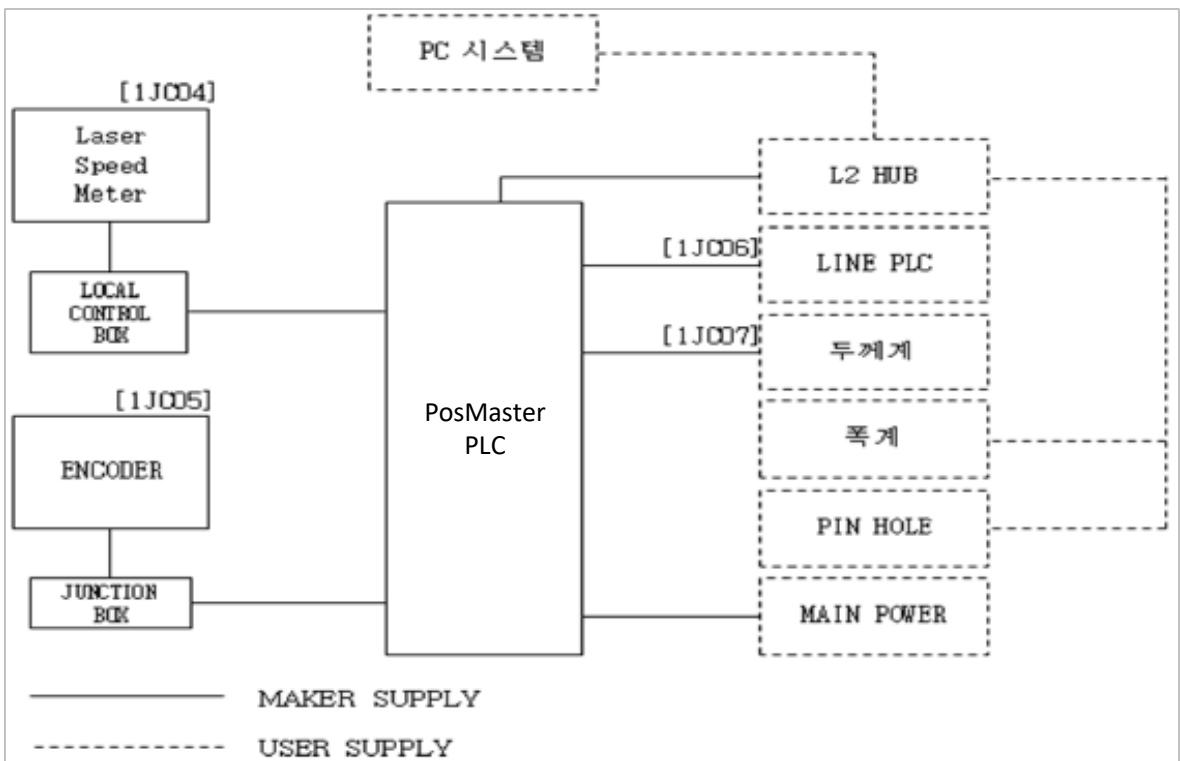
## 1. 시스템의 구성

### System Block Diagram

예시 1) EGL



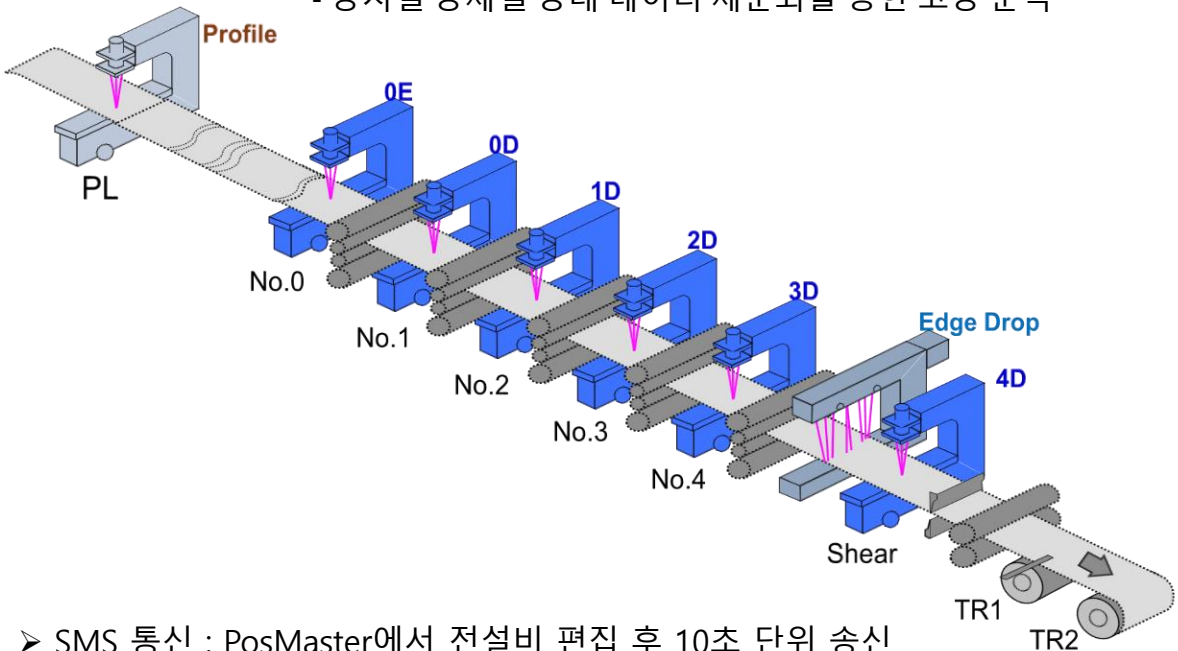
예시 2) CSL



## 2. Software 기능

### ➔ Control Function

- 대형 품질사고 방지를 위한 Smart 모니터링
  - Alloy Server 자동감시
  - 두께계간 Alloy Factor 비교
  - BS Customer, Strip Angle, Strip Temperature, Sample Set Compensation
- 두께계 주요 인자의 실시간 감시 기능
  - X-ray, 유틸리티 및 검출신호 계통, 중요 인자에 대한 Trend 구축
  - 핵심 구성품의 실시간 동작상태 (Ethercat, MT, XRG 등)
  - 두께계, PLC간 통신상태 등
- 정비자 자동 알림 구현으로 설비장애시간 최소화
  - Short Message 또는 SMS를 통한 포스트톡 전송
- 전 두께계 Stand-by 감시기능 강화 ... Fool Proof 구현
  - 측정대기 상태의 진단방법 개선 (전 두께계 단일화면에 구현)
- 체계적 부품관리
  - 핵심부품 교체이력 관리 (주기교체품 수명예측)
  - 장치별 상세별 상태 데이터 세분화를 통한 고장 분석



- SMS 통신 : PosMaster에서 전설비 편집 후 10초 단위 송신
- Data 수집주기 : 0.5초 주기로 수집, 10초주기로 SMS 송신
- 문자전송 & 설정 : 문자서버 구축 or 포스트톡 연결

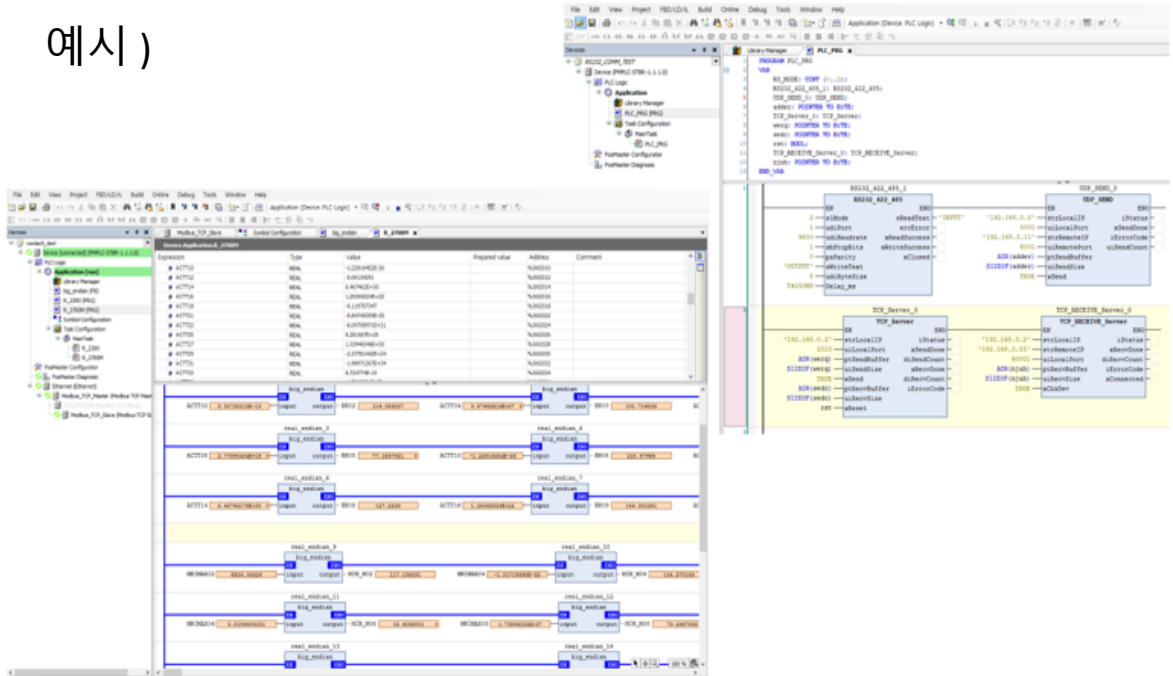


## 2. Software 기능

### ▶ Interface Function

- : Event Data의 사용자 SMS 또는 Short Message 전송
- : 두께 계측기  $\leftrightarrow$  PLC간 정주기 Interface, 통신 활성화 상태감시
- : PLC  $\leftrightarrow$  Smart Management Server 정주기 전문 Interface

예시)



Thickness Data

NAME	TYPE	DEVICE	ADDR	FORMAT	Thickness Value	Tracking Length
Throu_Col_001	REAL	Thickness	00002.00	Thickness 0 Data	10000	0
Throu_Col_002	REAL	Thickness	00002.01	Thickness 0 Data	10000	10
Throu_Col_003	REAL	Thickness	00002.02	Thickness 0 Data	10000	20
Throu_Col_004	REAL	Thickness	00002.03	Thickness 0 Data	10000	30
Throu_Col_005	REAL	Thickness	00002.04	Thickness 0 Data	10000	40
Throu_Col_006	REAL	Thickness	00002.05	Thickness 0 Data	10000	50
Throu_Col_007	REAL	Thickness	00002.06	Thickness 0 Data	10000	60
Throu_Col_008	REAL	Thickness	00002.07	Thickness 0 Data	10000	70
Throu_Col_009	REAL	Thickness	00002.08	Thickness 0 Data	10000	80
Throu_Col_010	REAL	Thickness	00002.09	Thickness 0 Data	10000	90
Throu_Col_011	REAL	Thickness	00002.10	Thickness 0 Data	10000	100
Throu_Col_012	REAL	Thickness	00002.11	Thickness 0 Data	10000	110
Throu_Col_013	REAL	Thickness	00002.12	Thickness 0 Data	10000	120
Throu_Col_014	REAL	Thickness	00002.13	Thickness 0 Data	10000	130
Throu_Col_015	REAL	Thickness	00002.14	Thickness 0 Data	10000	140
Throu_Col_016	REAL	Thickness	00002.15	Thickness 0 Data	10000	150
Throu_Col_017	REAL	Thickness	00002.16	Thickness 0 Data	10000	160
Throu_Col_018	REAL	Thickness	00002.17	Thickness 0 Data	10000	170
Throu_Col_019	REAL	Thickness	00002.18	Thickness 0 Data	10000	180
Throu_Col_020	REAL	Thickness	00002.19	Thickness 0 Data	10000	190
Throu_Col_021	REAL	Thickness	00002.20	Thickness 0 Data	10000	200
Throu_Col_022	REAL	Thickness	00002.21	Thickness 0 Data	10000	210
Throu_Col_023	REAL	Thickness	00002.22	Thickness 0 Data	10000	220
Throu_Col_024	REAL	Thickness	00002.23	Thickness 0 Data	10000	230
Throu_Col_025	REAL	Thickness	00002.24	Thickness 0 Data	10000	240
Throu_Col_026	REAL	Thickness	00002.25	Thickness 0 Data	10000	250
Throu_Col_027	REAL	Thickness	00002.26	Thickness 0 Data	10000	260
Throu_Col_028	REAL	Thickness	00002.27	Thickness 0 Data	10000	270
Throu_Col_029	REAL	Thickness	00002.28	Thickness 0 Data	10000	280
Throu_Col_030	REAL	Thickness	00002.29	Thickness 0 Data	10000	290
Throu_Col_031	REAL	Thickness	00002.30	Thickness 0 Data	10000	300
Throu_Col_032	REAL	Thickness	00002.31	Thickness 0 Data	10000	310
Throu_Col_033	REAL	Thickness	00002.32	Thickness 0 Data	10000	320
Throu_Col_034	REAL	Thickness	00002.33	Thickness 0 Data	10000	330
Throu_Col_035	REAL	Thickness	00002.34	Thickness 0 Data	10000	340
Throu_Col_036	REAL	Thickness	00002.35	Thickness 0 Data	10000	350
Throu_Col_037	REAL	Thickness	00002.36	Thickness 0 Data	10000	360
Throu_Col_038	REAL	Thickness	00002.37	Thickness 0 Data	10000	370
Throu_Col_039	REAL	Thickness	00002.38	Thickness 0 Data	10000	380
Throu_Col_040	REAL	Thickness	00002.39	Thickness 0 Data	10000	390
Throu_Col_041	REAL	Thickness	00002.40	Thickness 0 Data	10000	400
Throu_Col_042	REAL	Thickness	00002.41	Thickness 0 Data	10000	410
Throu_Col_043	REAL	Thickness	00002.42	Thickness 0 Data	10000	420
Throu_Col_044	REAL	Thickness	00002.43	Thickness 0 Data	10000	430
Throu_Col_045	REAL	Thickness	00002.44	Thickness 0 Data	10000	440
Throu_Col_046	REAL	Thickness	00002.45	Thickness 0 Data	10000	450
Throu_Col_047	REAL	Thickness	00002.46	Thickness 0 Data	10000	460
Throu_Col_048	REAL	Thickness	00002.47	Thickness 0 Data	10000	470
Throu_Col_049	REAL	Thickness	00002.48	Thickness 0 Data	10000	480
Throu_Col_050	REAL	Thickness	00002.49	Thickness 0 Data	10000	490
Throu_Col_051	REAL	Thickness	00002.50	Thickness 0 Data	10000	500

Width Data

NAME	TYPE	DEVICE	ADDR	FORMAT	Width Value	Tracking Length
Wid_Col_001	REAL	Width	00002.50	Width 0 Data	10000	0
Wid_Col_002	REAL	Width	00002.51	Width 0 Data	10000	10
Wid_Col_003	REAL	Width	00002.52	Width 0 Data	10000	20
Wid_Col_004	REAL	Width	00002.53	Width 0 Data	10000	30
Wid_Col_005	REAL	Width	00002.54	Width 0 Data	10000	40
Wid_Col_006	REAL	Width	00002.55	Width 0 Data	10000	50
Wid_Col_007	REAL	Width	00002.56	Width 0 Data	10000	60
Wid_Col_008	REAL	Width	00002.57	Width 0 Data	10000	70
Wid_Col_009	REAL	Width	00002.58	Width 0 Data	10000	80
Wid_Col_010	REAL	Width	00002.59	Width 0 Data	10000	90
Wid_Col_011	REAL	Width	00002.60	Width 0 Data	10000	100
Wid_Col_012	REAL	Width	00002.61	Width 0 Data	10000	110
Wid_Col_013	REAL	Width	00002.62	Width 0 Data	10000	120
Wid_Col_014	REAL	Width	00002.63	Width 0 Data	10000	130
Wid_Col_015	REAL	Width	00002.64	Width 0 Data	10000	140
Wid_Col_016	REAL	Width	00002.65	Width 0 Data	10000	150
Wid_Col_017	REAL	Width	00002.66	Width 0 Data	10000	160
Wid_Col_018	REAL	Width	00002.67	Width 0 Data	10000	170
Wid_Col_019	REAL	Width	00002.68	Width 0 Data	10000	180
Wid_Col_020	REAL	Width	00002.69	Width 0 Data	10000	190
Wid_Col_021	REAL	Width	00002.70	Width 0 Data	10000	200
Wid_Col_022	REAL	Width	00002.71	Width 0 Data	10000	210
Wid_Col_023	REAL	Width	00002.72	Width 0 Data	10000	220
Wid_Col_024	REAL	Width	00002.73	Width 0 Data	10000	230
Wid_Col_025	REAL	Width	00002.74	Width 0 Data	10000	240
Wid_Col_026	REAL	Width	00002.75	Width 0 Data	10000	250
Wid_Col_027	REAL	Width	00002.76	Width 0 Data	10000	260
Wid_Col_028	REAL	Width	00002.77	Width 0 Data	10000	270
Wid_Col_029	REAL	Width	00002.78	Width 0 Data	10000	280
Wid_Col_030	REAL	Width	00002.79	Width 0 Data	10000	290
Wid_Col_031	REAL	Width	00002.80	Width 0 Data	10000	300
Wid_Col_032	REAL	Width	00002.81	Width 0 Data	10000	310
Wid_Col_033	REAL	Width	00002.82	Width 0 Data	10000	320
Wid_Col_034	REAL	Width	00002.83	Width 0 Data	10000	330
Wid_Col_035	REAL	Width	00002.84	Width 0 Data	10000	340
Wid_Col_036	REAL	Width	00002.85	Width 0 Data	10000	350
Wid_Col_037	REAL	Width	00002.86	Width 0 Data	10000	360
Wid_Col_038	REAL	Width	00002.87	Width 0 Data	10000	370
Wid_Col_039	REAL	Width	00002.88	Width 0 Data	10000	380
Wid_Col_040	REAL	Width	00002.89	Width 0 Data	10000	390
Wid_Col_041	REAL	Width	00002.90	Width 0 Data	10000	400
Wid_Col_042	REAL	Width	00002.91	Width 0 Data	10000	410
Wid_Col_043	REAL	Width	00002.92	Width 0 Data	10000	420
Wid_Col_044	REAL	Width	00002.93	Width 0 Data	10000	430
Wid_Col_045	REAL	Width	00002.94	Width 0 Data	10000	440
Wid_Col_046	REAL	Width	00002.95	Width 0 Data	10000	450
Wid_Col_047	REAL	Width	00002.96	Width 0 Data	10000	460
Wid_Col_048	REAL	Width	00002.97	Width 0 Data	10000	470
Wid_Col_049	REAL	Width	00002.98	Width 0 Data	10000	480
Wid_Col_050	REAL	Width	00002.99	Width 0 Data	10000	490
Wid_Col_051	REAL	Width	00003.00	Width 0 Data	10000	500

누설자속 Data

NAME	TYPE	DEVICE	ADDR	FORMAT	CLCT Value	Tracking Length
CLCT_Col_001	REAL	CLCT	00002.99	CLCT 0 Data	10000	0
CLCT_Col_002	REAL	CLCT	00002.100	CLCT 0 Data	10000	10
CLCT_Col_003	REAL	CLCT	00002.101	CLCT 0 Data	10000	20
CLCT_Col_004	REAL	CLCT	00002.102	CLCT 0 Data	10000	30
CLCT_Col_005	REAL	CLCT	00002.103	CLCT 0 Data	10000	40
CLCT_Col_006	REAL	CLCT	00002.104	CLCT 0 Data	10000	50
CLCT_Col_007	REAL	CLCT	00002.105	CLCT 0 Data	10000	60
CLCT_Col_008	REAL	CLCT	00002.106	CLCT 0 Data	10000	70
CLCT_Col_009	REAL	CLCT	00002.107	CLCT 0 Data	10000	80
CLCT_Col_010	REAL	CLCT	00002.108	CLCT 0 Data	10000	90
CLCT_Col_011	REAL	CLCT	00002.109	CLCT 0 Data	10000	100
CLCT_Col_012	REAL	CLCT	00002.110	CLCT 0 Data	10000	110
CLCT_Col_013	REAL	CLCT	00002.111	CLCT 0 Data	10000	120
CLCT_Col_014	REAL	CLCT	00002.112	CLCT 0 Data	10000	130
CLCT_Col_015	REAL	CLCT	00002.113	CLCT 0 Data	10000	140
CLCT_Col_016	REAL	CLCT	00002.114	CLCT 0 Data	10000	150
CLCT_Col_017	REAL	CLCT	00002.115	CLCT 0 Data	10000	160
CLCT_Col_018	REAL	CLCT	00002.116	CLCT 0 Data	10000	170
CLCT_Col_019	REAL	CLCT	00002.117	CLCT 0 Data	10000	180
CLCT_Col_020	REAL	CLCT	00002.118	CLCT 0 Data	10000	190
CLCT_Col_021	REAL	CLCT	00002.119	CLCT 0 Data	10000	200
CLCT_Col_022	REAL	CLCT	00002.120	CLCT 0 Data	10000	210
CLCT_Col_023	REAL	CLCT	00002.121	CLCT 0 Data	10000	220
CLCT_Col_024	REAL	CLCT	00002.122	CLCT 0 Data	10000	230
CLCT_Col_025	REAL	CLCT	00002.123	CLCT 0 Data	10000	240
CLCT_Col_026	REAL	CLCT	00002.124	CLCT 0 Data	10000	250
CLCT_Col_027	REAL	CLCT	00002.125	CLCT 0 Data	10000	260
CLCT_Col_028	REAL	CLCT	00002.126	CLCT 0 Data	10000	270
CLCT_Col_029	REAL	CLCT	00002.127	CLCT 0 Data	10000	280
CLCT_Col_030	REAL	CLCT	00002.128	CLCT 0 Data	10000	290
CLCT_Col_031	REAL	CLCT	00002.129	CLCT 0 Data	10000	300
CLCT_Col_032	REAL	CLCT	00002.130	CLCT 0 Data	10000	310
CLCT_Col_033	REAL	CLCT	00002.131	CLCT 0 Data	10000	320
CLCT_Col_034	REAL	CLCT	00002.132	CLCT 0 Data	10000	330
CLCT_Col_035	REAL	CLCT	00002.133	CLCT 0 Data	10000	340
CLCT_Col_036	REAL	CLCT	00002.134	CLCT 0 Data	10000	350
CLCT_Col_037	REAL	CLCT	00002.135	CLCT 0 Data	10000	360
CLCT_Col_038	REAL	CLCT	00002.136	CLCT 0 Data	10000	370
CLCT_Col_039	REAL	CLCT	00002.137	CLCT 0 Data	10000	380
CLCT_Col_040	REAL	CLCT	00002.138	CLCT 0 Data	10000	390
CLCT_Col_041	REAL	CLCT	00002.139	CLCT 0 Data	10000	400
CLCT_Col_042	REAL	CLCT	00002.140	CLCT 0 Data	10000	410
CLCT_Col_043	REAL	CLCT	00002.141	CLCT 0 Data	10000	420
CLCT_Col_044	REAL	CLCT	00002.142	CLCT 0 Data	10000	430
CLCT_Col_045	REAL	CLCT	00002.143	CLCT 0 Data	10000	440
CLCT_Col_046	REAL	CLCT	00002.144	CLCT 0 Data	10000	450
CLCT_Col_047	REAL	CLCT	00002.145	CLCT 0 Data	10000	460
CLCT_Col_048	REAL	CLCT	00002.146	CLCT 0 Data	10000	470
CLCT_Col_049	REAL	CLCT	00002.147	CLCT 0 Data	10000	480
CLCT_Col_050	REAL	CLCT	00002.148	CLCT 0 Data	10000	490
CLCT_Col_051	REAL	CLCT	00002.149	CLCT 0 Data	10000	500