

# 技術文書に必要な資料、レポートの集成

## 1. 技術資料の準備

- ① 重要部品 \*部品、部組品、材料リスト(CDF)、カタログ、仕様書、認定品資料(ラテンスコ-) 他
- ② 構造と機構 \*基本構造と保護機構 他
- ③ 電気系ブロック図 \*電源、制御システム、センサ、安全保護装置 他
- ④ リスク分析、評価データ \*危険源特定と見積、リスク低減と対策

## 2. 試験データのまとめとテストレポート(機械、低電圧、EMC 他)の作成

■ 技術資料の例 ※規模の大きい機械やレーザ装置は別途

### (1) 技術情報

- 1. 仕様書 Specifications
- 2. 電気系ブロック図(電気図) Electrical Block Diagram
- 3. 圧力回路系統図 Pressure Block Diagram
- 4. 重要部品表 CDF (Construction Data Form)  
又は部品表 Critical parts: \*認定品情報
- 5. 構造図、写真 Constructions, Photos
- 6. 試験(測定)データ Test Data \*IPテストレポート等
- 7. パターン図 PWB Wirings, Artworks \*基板の電圧マップ
- 8. 表示 Label \*定格銘板、注意ラベル 他
- 9. 英文マニュアル Instruction Manual \*ユーザーマニュアル他
- 10. 英文カタログ Catalogue
- 11. 認定書 Certificate for Approved parts, Sub-Assemblies \*又は適合証明書、レポート等
- 12. テストレポート Test Reports \*重要部品に関して
- 13. リスク分析、評価シート Risk Analysis Sheet
- 14. その他 Others \*サンプル撮影(外観、内部構造)

### (2) テストレポート Test Report

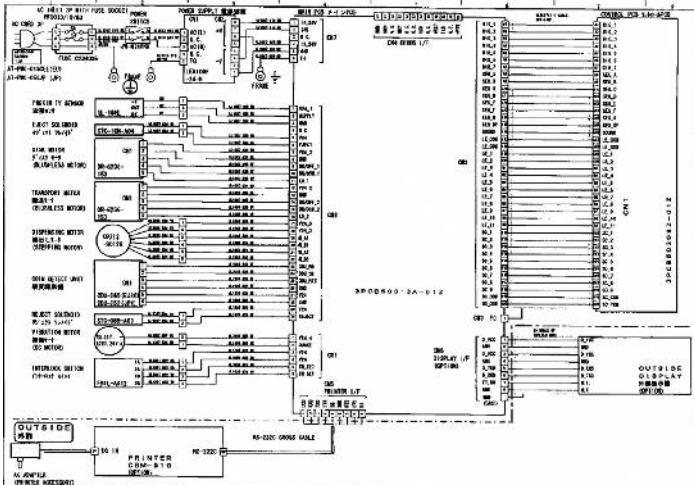
- 1. 機械安全 Machinery Safety
- 2. 電気安全 Electrical safety
- 3. レーザ安全 Laser Safety
- 4. EMC Electric Magnetic Compatibility



**IMPORTANT**

設計段階から本資料をご準備することがポイントです。

## ① Electrical Block Diagram



## ② CDF (Construction Data Form)

Unique component reference or location (including drawing reference if required)	Application/Function	Manufacturer (NOTE 1)	Part number	RATING (NOTE 2)	Evidence of acceptance (NOTE 3)
Power Cord Set	AC Input	N/A	N/A	N/A	Not included in the scope of assessment (will be provided by a distributor)
AC Inlet	AC Input	Sumida Muten Kogyo K.K.	M1998-U (Cat.#NL-11-4)	AC250V 10A	VUE-40302409 UL
Power Switch	AC Input	Alps Electric Co., Ltd	801N-F30300	AC250V 10A	VNF-128054 UL
Connector (CN1)	Primary	Japan Solderless Terminal Mfg. Co., Ltd.	32PQ-V11	AC250V 7A Housing: Water, V.0	TUV-R75122 UL
Fuse (F1)	Primary	Littlefuse B.V.	No. 219.3-15MF305	AC250V 3.15A	SDMKO-894364301-10 IEC
Capacitor (CA, CB)	Y Capacitor (Y2)	Matsushita electronics Components Co., Ltd.	Type 1S (EONATS102MC)	1000pF AC250V	VUE-122019 UL
Capacitor (C1, C2)	X Capacitor (X2)	Matsushita Electronics Components Co., Ltd.	Type F001II	0.1µF AC270V	VNF-121548 UL
Capacitor (C16)	Bridge Capacitor (Y1)	Matsushita Electronics Components Co., Ltd.	Type NS-A (ACKUNAZZ2Me or ACKUNAZZ2F1)	2200pF AC250V	VOE-08172 UL
Line Filter (L1)	—	Matsushita Electronics Components Co., Ltd.	DLF21N015A	16mH 1.5A AC250V Rubber: V.0	IEC
Transformer (T1)	Fuse Transformer	Kemula Electric Co., Ltd.	HC5225A	—	(used separately and in UL) EN61010-1:2001
Battery pack T1	—	Sanyo Denki Co., Ltd.	PMR320	V.0	UL

EN No. EUCR004 Ver. 1.0

## ③ Risk Assessment Report

**Example**

**RISK ASSESSMENT**

Product: FSS PRODUCT Date: Day Mon., Year Rev: 0  
Model: FSS (Applicable Standard: EN 10523:1996)

**STEP 1: Hazardous Identification**

(1) Manufacture (2) Transportation (3) Installation (4) Operation (5) Maintenance (6) Service (7) Disassembly

Kind of Hazards	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Mechanical Hazards	② Described in STEP 2 and 3.						
a. Shape (Sharp edge, Rough surfaces, etc.)							
b. Inadequate Operation or Mechanical Strength							
c. Crushing, Impact, Cutting, Pinching, etc.				●	●		
d. Falling, Imbalance							
e. Others							

**STEP 2: Action against Hazardous Items**

**1. Risk Identifications**

Item	Severity	Probability	Total Points	Rank
1c-(4),(5)	2	4	8	H

**2. Risk Analysis (Hazardous contents and Countermeasures)**

Identification	Contents
FEEDER	Risk of injury by entangling the operator's hands or clothes in the feeding roller.

**3. Countermeasures**

Countermeasures in design	Residual risks and Countermeasures
Put a cover over the roller so that one's hands or clothes would not reach it.	To protect the operator's hands from getting stuck in the feeding roller. 1. Put caution label on the hazardous area. 2. Describe caution in the user's manual.

**STEP 3: Risk Assessment**

After countermeasures	Remarks
Tolerable risk.	Refer to the operation manual.

**Definition: Risk= Severity (Degree of damage)\*Probability (Occurrence of an injury or damage)**  
Severity: 1:Minor 2:Light 3:Moderate 4: Severe 5:Fatal or Catastrophic  
Probability: 1:Unthinkable 2:Unlikely 3:Likely to occur at times 4:Likely to occur sometimes 5:Likely to occur frequently  
Total points: The product of severity assessment points by the probability of the occurrence assessment points  
Rank: L(Low) from 1 to 3, M(Medium) from 4 to 7, H(High) from 8 to 11, C(Critical) from 12 \* Depending on total points  
Copyright © 2007, FSS Corporation 1/1