



Exploration & Production

GENERAL SPECIFICATION

FIELD OPERATION

GS EP EXP 221

Data formats for UNISUP/SALSA PM loading

02	10/09	Extension to SALSA. Change for FL Classification, Measuring Points (counters), Tasks Lists & Plans. New system condition codes.
01	10/08	Change for FL, BOM, Objects Links, Measuring Points and Tasks Lists
00	10/05	First issue including UNISUP templates
Rev.	Date	Notes



Contents

1. Scope	5
2. Reference documents.....	5
3. General.....	6
3.1 Definitions / abbreviations.....	6
3.2 Objectives of this specification.....	7
3.3 Responsibilities of parties	7
4. Organisation	8
4.1 Data preparation and loading	8
4.2 Template files	8
5. UNISUP/SALSA Organisational Data.....	9
5.1 Maintenance Plant.....	9
5.2 Planning Plant.....	9
5.3 Planner Group	10
5.4 Work Centres.....	10
6. Functional Locations	10
6.1 General.....	10
6.2 Different types of FL	11
6.3 FL General Data	12
6.4 FL Long Description.....	17
6.5 Classification(x)	17
7. Equipment.....	18
7.1 General.....	18
7.2 Equipment Creation	18
7.3 Equipment Identification in the Templates	19
7.4 EQ General Data	19
8. Classification.....	21
8.1 General.....	21
8.2 TO Classification.....	22



8.3	FL Classification	23
8.4	EQ Classification	23
9.	Bills of material	24
9.1	General.....	24
9.2	BOM Creation (Template BOM)	26
9.3	BOM Assignment (Templates BOM and BOMASS).....	27
10.	SAP Documents	28
10.1	General.....	28
10.2	Folders.....	28
10.3	SAP Documents General Data	28
10.4	SAP Documents Long Description	30
10.5	SAP Documents Assignment.....	31
11.	Objects Links.....	32
11.1	General.....	32
11.2	Objects Links Data.....	32
12.	Maintenance Measuring Points.....	34
12.1	General.....	34
12.2	Measuring Points General Data.....	35
12.3	Measuring Points Long Description	39
12.4	MP Classification	39
12.5	Measurement Documents Data	40
13.	Measurement Documents.....	40
13.1	General.....	40
13.2	Measurement Documents General Data	41
13.3	Measurement Documents Long Description.....	42
14.	Counters	42
15.	Inspection Measuring Points	43
15.1	General.....	43
15.2	Inspection Routes	44
15.3	Measuring Points data and Routes assignment	44
15.4	Measurement Documents Data	48



16. Standard Texts	48
16.1 General.....	48
16.2 Standard Texts data	49
17. Task Lists.....	50
17.1 General.....	50
17.2 Task List Header.....	51
17.3 Task List Long Description	53
17.4 Operations	54
17.5 Operations Long Description	56
17.6 Components	56
17.7 PRT Documents	57
18. Maintenance and Inspection Plans.....	57
18.1 General.....	57
18.2 Specific to inspection	58
18.3 Plan Header.....	59
18.4 Items	61
18.5 Items Long Description	64
18.6 Objects lists	64
Appendix 1 FAME+ assessed equipments - Links between Measuring Points / Routes / Task List / Inspection Plan	66
Appendix 2 Recommended Naming convention for Route / Task List / Inspection Plan and examples	67
Appendix 3 List of Templates	77



1. Scope

The purpose of this document is to define and describe the files and data to be provided by the Maintenance/Inspection Engineering for the data mass preparation before loading in UNISUP/SALSA PM.

This specification is mainly dedicated to projects and it is also applicable for existing data base upgrades.

Template files have been created by the COMPANY for several types of data (installation structure, technical information, spare parts, preventive maintenance and inspection).

2. Reference documents

The reference documents listed below form an integral part of this General Specification. Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published at the EFFECTIVE DATE of the CONTRACT.

Standards

Reference	Title
Not applicable	

Professional Documents

Reference	Title
Not applicable	

Regulations

Reference	Title
Not applicable	

Codes

Reference	Title
Not applicable	

Other documents

Reference	Title
FAME+ User guide FAME+ to WSE Measuring Point Creation	FAME+ Implementation Guidance-Guidance No. 001 Procedure for the creation of Written Scheme of Examination UNISUP_InspMPs_Route(v20xx.y).xls



Total General Specifications

Reference	Title
GS EP EXP 205	Requirements to MIEC Contractor for spare parts
GS EP EXP 207	Installation description structure
GS EP EXP 501	Equipment and piping numbering
GS EP EXP 311	Plan Integrity - Minimum inspection requirements

3. General

3.1 Definitions / abbreviations

COMPANY	Party signing contracts and orders on behalf of the customer
Manager (Project Group - PG)	Party acting as representative of the COMPANY
EPC	Engineering Procurement and Construction CONTRACTOR working under control of the COMPANY (generally in charge of Engineering of facilities, procurement of equipment and construction)
SUPPLIERS/MANUFACTURERS	SUPPLIERS or MANUFACTURER of packages equipment or materials.
Maintenance Engineering (ME)	Party in charge of the maintenance data preparation, including spare parts dossiers. This party may be a CONTRACTOR (MEC) or even a SUBCONTRACTOR of the EPC
Inspection Engineering (IE)	Party in charge of the inspection data preparation, including FAME+ assessment. This party may be a CONTRACTOR (IEC) or even a SUBCONTRACTOR of the EPC
Maintenance and Inspection Engineering (MIE)	Party in charge of the maintenance preparation, including spare parts dossiers, and the inspection data preparation, including FAME+ assessment This party may be a CONTRACTOR (MIEC) or even a SUBCONTRACTOR of the EPC
CMIMS	Computerized Maintenance and Inspection Management System (UNISUP or SALSA)
FL	Functional Location
BOM	Bills of Material (list of spare parts)

3.2 Objectives of this specification

The objectives of this specification are:

- To specify the responsibilities of parties in the data preparation and implementation process for the COMPANY CMIMS
- To define the different fields to be provided by the ME/IE in Template files for data loading into the COMPANY CMIMS

Templates files are provided by the COMPANY in connection with this specification.

- To provide ME/IE with an understanding of the COMPANY CMIMS structure and data organization.

3.3 Responsibilities of parties

The ME/IE shall:

- Collect, complete and verify the data to be loaded in the CMIMS, according to the COMPANY specifications
- Comply with the CMIMS data, structures and rules issued by the Project Group, the Affiliate and the COMPANY headquarters.

The CMIMS objects (see definition in the specification **GS EP EXP 207**) here under are either supplied by the ME/IE or defined by the COMPANY:

Objects defined by the COMPANY

- Organisational data (example : Planner Groups and Work Centres)
- Sites and Sectors (FL levels 1 and 2).

Objects assigned to the ME preparation team:

- Functional Locations (levels 3 and below) and Equipment
- Classes and Characteristics
- Bills of Materials (Spare parts lists)
- Documents (links with electronic documents)
- Maintenance Measuring points (counters) and Measurement Documents
- Standard Texts (Maintenance detailed instructions or procedures).
- Task Lists & Maintenance Plans (Preventive Maintenance)

Objects assigned to the IE preparation team:

- Functional Locations (levels 3 and below)
- Classes and Characteristics
- Inspection Measuring points and Measurement Documents
- Measuring Points classification
- Inspection Routes
- Standard Texts (Inspection detailed instructions or procedures).



- Task Lists & Inspection Plans

The ME/IE shall populate the Template files with the data gathered from the SUPPLIERS or MANUFACTURERS, data given by the COMPANY (List of Values, extracts form SAP, etc.) and other sources if required.

The fields in the Template files which are not mentioned in this specification and in the project documents shall not be taken in account by the ME/IE. However, these fields shall be present in the Template populated by the ME/IE, empty and their columns at the right place.

4. Organisation

4.1 Data preparation and loading

The global process of data preparation and loading is done according to the following steps:

- COMPANY provides the ME/IE with specifications and requirements concerning the data engineering. (Types of data, level of detail, etc.)
- Data extractions from the affiliate UNISUP/SALSA system by the COMPANY and mailing to the ME/IE by the COMPANY
- Maintenance data engineering and Template files preparation by the ME/IE.
- Quality checks of template files under the responsibility of the COMPANY (consistency, information system, data formats, etc.). Correction as appropriate by the ME/IE.
- Enrichment of the files by the COMPANY with its own data (UNISUP/SALSA configuration of the affiliate). Preparation for data loading in UNISUP/SALSA
- Data loading in test database and in production database by COMPANY.

All the CMIMS data will be checked by the COMPANY with respect to their consistency and quality, for engineering work acceptance.

The schedule of the data file creation and supplying shall be defined between the COMPANY and the ME/IE during the kick off meeting of the CMIMS data engineering project.

4.2 Template files

4.2.1 Definition

A Template is an Excel file which contains:

- Always a sheet "**Header**" (Template identification).
- One or several sheets to collect the required data.

The Templates for Maintenance & Inspection data are found in appendix 3.

4.2.2 Fields Description

In this documentation, the fields to be populated for each template are presented in tables like the one below:

Field	Description/Comments	Format	LoV	
FL Code	Complete Functional Location Code	C(40)		
Parent FL	Parent Functional Location code	C(40)		
FL description		C(40)		
Class	FL Class (GS EP EXP 207)	C(18)	X	

Legend:

- Yellow cell: \ Mandatory field ()
- Field Format:
 - C(n) → Text in n characters maximum
 - N(e) → Integer in e figures maximum
 - N(e,d) → Number with e integers and d decimals maximum
 - DD/MM/YYYY → Date
- LoV = "X" → The field refers to a restrictive list of values provided by the COMPANY.
-  → Additional comments in next pages.

5. UNISUP/SALSA Organisational Data

The Organisational Data are created in UNISUP/SALSA by the COMPANY and are supplied to the ME/IE as list of values.

These data are returned by the MI/IE in the relevant Templates.

5.1 Maintenance Plant

A **Maintenance Plant** represents a localisation where installations to be maintained are defined.

5.2 Planning Plant

A **Planning Plant** represents the organisation in charge of the maintenance of a Maintenance Plant.

5.3 Planner Group

A **Planner Group** represents an organisation responsible for the planning and processing of maintenance tasks in a particular Planning Plant.

Example:

PIPI	PG	Name
NG50	EL	Electrical
NG50	IN	Instruments
NG50	IP	Inspection
NG50	ME	Mechanical

5.4 Work Centres

Work centres represent the teams and the trades of the workers intervening on the installations. They are related to a Plant.

Example:

Plnt	Work ctr	Short description
NGD0	AM-GMELE	AMENAM GMC SITE ELECTRICIANS
NGD0	AM-GMHVC	AMENAM GMC HVAC SPECIALIST
NGD0	AM-GMINI	AMENAM GMC SITE INSTRUMENTIST
NGD0	AM-GMMEC	AMENAM GMC SITE MECHANICS
NGD0	AM-GMPLN	AMENAM GMC PLANNER
NGD0	AM-GMTUR	AMENAM GMC TURBINE SPECIALIST
NGD0	AM-INTEG	AMENAM SITE INSPECTOR

6. Functional Locations

6.1 General

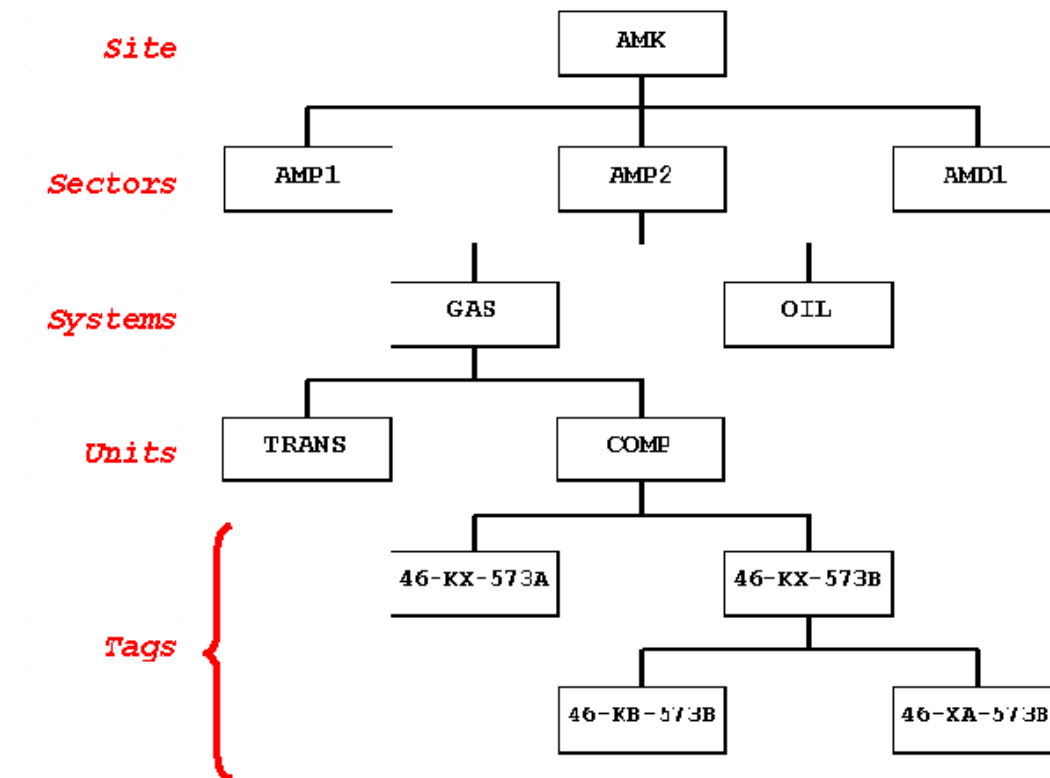
The Functional locations (**FL**) serve to describe, by a structural breakdown (tree structure - each object has one and only one parent), the different functions of the installations to be maintained and for which historical records and/or maintenance costs need to be kept.

The guidelines and rules for preparing the hierarchy of FL are detailed in the specification [GS EP EXP 207](#).

The first four levels of the structure are named **Sites**, **Sectors** (Platforms), **Systems** and **Units** (see [GS EP EXP 207](#) for definition).

The others FL under the units are named **Tags**.

Example of FL structure:



The Template for Functional Locations is named

10-PM_Template_Functional_Locations (Vx.y).xls and contains five sheets:

- **Functional Locations** → FL general data
- **FL Texts** → FL long descriptions
- **Classification(1)** → 1st sheet for FL/EQ Classification
- **Classification(2)** → 2nd sheet for FL/EQ Classification
- **Classification(3)** → 3rd sheet for FL/EQ Classification

6.2 Different types of FL

6.2.1 Site, Sector (Platform), System, Unit

The Sites and Sectors (Platforms) are created manually in UNISUP/SALSA by the COMPANY.

These FLs must not be declared in the Template.

List of allowed Systems and Units are given by the COMPANY to the ME/IE as reference data (List of Values). It can be done, but it is not necessary to declare these FLs in the Template (they can be automatically generated during the checking of the Template).



6.2.2 Tags (Functional Locations from level 5)

A process function must be described in the CMIMS as a Functional Location if it is necessary to follow its maintenance and inspection history and/or cost.

It is referenced in project documents and UNISUP/SALSA PM by a tag which is created according to the rules defined into the reference document **GS EP EXP 501**.

Some Functional Locations can be declared to group other ones, making the structure easier to read and use.

Main Tag: Tag linked directly to a unit (corresponds to a FL of level five).

Sub-Tag: Tag linked to a Main Tag or another Sub-Tag (corresponds to a FL of level six and below).

Specific to inspection: pressure systems are submitted to FAME+ criticality assessment, with the following consequences for Functional Locations.

- It may be necessary to create Sub-Tags to reflect the breakdown of the FAME+ structure. This is the case for multipart vessels (e.g. V101-Water phase, V101-Oil phase, etc.); tubular heat exchangers, etc.,
- For piping, Tags used in the CMIMS are corresponding to the Groups of Piping that are defined prior any FAME+ assessment; grouping is made according to the rules that are described into the user manual "FAME+ Implementation Guidance", where the numbering scheme (Tag) for Groups of Piping is defined. In addition, it is recommended that the individual lines are described as Sub-Tags in the structure; this is to get the "official" list of lines within the CMIMS.

6.3 FL General Data

The following data shall be populated in the sheet "**Functional Locations**".

NB:

The parents FL have to be placed in the Template before their children.

Field	Description/Comments	Format	LoV	
FL Code	Functional Location Code	C(40)		
Parent FL	Parent Functional Location code	C(40)		
FL description	Functional Location Description	C(40)		
Class	FL Class (GS EP EXP 207)	C(18)	X	
Weight	Weight of the object in Kg.	N(10,2)		
Manufacturer ⁽¹⁾	Manufacturer Name	C(30)	X	
Manufacturer Part Number	Reference of the Object for the Manufacturer	C(30)		
Manufacturer Model Number ⁽¹⁾	Model identification (Type)	C(20)		
Manufacturer Serial Number ⁽¹⁾		C(30)		
Year of Construction		N(4)		
Month of Construction		N(2)		
Acquisition Date		DD/MM/YYYY		
Criticality	V / C / S : Mandatory for level 5	C(1)		
Planner Group		C(3)	X	
Main Work Centre		C(8)	X	
Catalog Profile		C(9)		
Position	Allows sorting the FL among all the FL of the same parent	N(4)		
Construction type	Assembly code, see below.	C(18)		
Install Equipment	"X" when an Equipment is needed for the FL "Y" for Workshops and warehouses	C(1)		
Equipment description	Must be filled only when the previous field is "X"	C(40)		

(1) Manufacturer Data are mandatory when equipment is required for the FL.

6.3.1 Functional Location code:

The Functional Location Code is constituted with several parts separated by a slash (/) and must follow the format below:

- For a System (FL level 3) → **AAA/BBBBB/CCC**
- For a Units (FL level 4) → **AAA/BBBBB/CCC/DDDDD**
- For a Tag (FL from level 5) → **AAA/BBBBB/CCC/DDDDD/EEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE**

Where:

- **AAA** = Site (up to 3 characters)
- **BBBBB** = Sector (up to 5 characters)
- **CCC** = System (up to 3 characters)
- **DDDDD** = Unit (up to 5 characters)
- **EEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE** = Tag (up to 20 characters)

Example:

AMK/AMP2 /GAS/COMP /46-KX-573A

- In fact, the FL Code contains all the upper levels codes except for the sub-tags (level 6 and below) for which only the four first levels are repeated.
- The slash separator is accepted only in positions 4, 10, 14 and 20. If needed, the code before the separator must be completed by spaces.
- Only letters, figures, spaces, dashes (-) and underscore (_) are allowed in the Tag (last part of the code). All others specials characters are forbidden.
- The Functional Location Code must be unique in the Template.

6.3.2 FL description:

The FL description shall mention the functional use of the object (process use) and the category of material installed (pump, filter, motor, etc).

In the case of several similar objects, the description must contain information to identify each of them individually (Pump **A**, Pump **B**, PSV **1**, PSV **2**, PSV **3**, ...)

Example:

Second Stage Compressor Train **A**



6.3.3 Class:

The classes allow identifying the different categories of materials referenced in UNISUP/SALSA.

- electric motors
- horizontal centrifugal pumps
- pressure safety valves
- pressure transmitters
- etc.

The ME/IE must refer to the list of values provided by the COMPANY.

6.3.4 Manufacturer Data:

These data come from the Manufacturer's documentation and are available for Tags only.

They shall be populated if they are known. **Manufacturer Name, Model Number and Serial Number are mandatory when Equipment is needed for the FL.**

Manufacturer Name:

The Manufacturer Name must be completed by the ME/IE by using the list of values provided by the COMPANY.

If new Manufacturers are needed, the names will be proposed by the ME/IE and validated by the COMPANY.

Part Number:

This is the reference given to the object by the manufacturer.

Model number:

This is the model identification (type) for the object.

Serial Number:

The serial number is the number assigned by the manufacturer for an individual object.

6.3.5 Acquisition Date:

Specific to Total E&P Indonesia.

This date is used to store the expired date of Migas certificate (recertification purpose).

6.3.6 Criticality:

Possible values are **V**, **C** or **S**, for Vital, Critical or Secondary.

The criticality codes should come from a RCM study.

This information is useless for Systems and Units, **required for Main Tags** and optional for Sub-Tags.

6.3.7 Catalog Profile:

A catalogue profile is a link from the FL to a set of failure codes (damages, causes, activities) that can be used to populate the notifications and notifications reports. These codes allow the COMPANY to make failure analysis.

Refer to the list of values provided by the COMPANY.

6.3.8 Position:

This field is used to sort the FL at each level when the structure is displayed in UNISUP/SALSA. It is recommended to increment this number by ten to allow the future insertions.

6.3.9 Construction type:

This field, dedicated to Tags and forbidden for Systems and Units, allows allocating a BOM (list of spare parts) to the FL by use of an **Assembly code**.

It can be used when the required BOM already exists in UNISUP/SALSA. In this case, the list of the reusable BOM is provided to the ME/IE by the COMPANY.

The link between BOM and FL is usually done with the Template BOM or BOMAss.

6.3.10 Install Equipment:

This field, dedicated to Tags and forbidden for Systems and Units, may be filled in with:

- **X →** to mean the single installation of Equipment on the FL.

In this case:

- The Class, the Manufacturer Name, the Model Number and the Serial Number are mandatory.
- In addition to the FL, an Equipment will be created in UNISUP/SALSA (automatic numbering) and linked to the FL.
- The Manufacturer Data and the Construction Type will be created on the Equipment and not on the FL.
- **Y →** to authorize the installation of several Equipment on the FL.

This value is reserved for specific FL like workshops and warehouses.

See chapter 7 for more explanations about Equipment.

6.3.11 Equipment description:

The Equipment description is mandatory when the field 'Install Equipment' contains "**X**" and shall mention the technical function of the equipment (for example the class description).

6.4 FL Long Description

Additional descriptions concerning Functional Location can be stored in UNISUP/SALSA as free text.

If needed, these data shall be populated in the sheet "FL Texts".

Field	Description/Comments	Format	LoV	
FL Code	Functional Location Code	C(40)		
Line number	Line number	N(3)		
Text	One line of text	C(64)		

6.5 Classification(x)

The classes for FL are already defined in the sheet 'Functional Locations'.

The classification sheets (**Classification(1)** to **(3)**) shall only be used to enter characteristics values for the FL.

Enter the characteristic without taking into account the installation of the EQ on the FL.

If needed, the splitting of characteristics between the FL and the EQ will be automatically done during the checking of the Template.

Specific Templates for FL & EQ classification are also available to provide the classification when it can't be delivered with the FL template.

Field	Description/Comments	Format	LoV	
FL Code	Functional Location Code	C(40)		
Class	Class Code	C(18)	X	
Characteristic	Characteristic Code	C(30)	X	
Value	Characteristic Value	C(30)		

When several lines are needed to classify a FL (more than one characteristic value) the header data (FL Code and Class) must be repeated on each line.

6.5.1 Class:

Must be the same as the one assigned to the FL in the sheet 'Functional Locations'.

6.5.2 Characteristic:

Refer to the **Referential for technical objects classification in UNISUP/SALSA** to get the characteristics codes (**TO_nnnnnnn**) and to know the list of allowed characteristics per class.



6.5.3 Value:

If possible, a value shall be filled in for each characteristic declared in the class. Some characteristics are mandatory.

Refer to the **Referential for technical objects classification in UNISUP/SALSA** to identify the mandatory characteristics and to get the requirements for the values (format, number of characters, number of decimals, restrictive list of values, etc.).

7. Equipment

7.1 General

To describe a technical object in UNISUP/SALSA, a Tag is necessary and, in some cases, an Equipment must also be declared.

An Equipment represents a unique physical component that can be installed on a Tag for which it ensures the required function.

An Equipment should be declared according to the COMPANY requirements and the following rules:

- Its location may change during its lifetime.
- Historical records of movements (installation and removal) need to be kept for technical, economic or regulatory reasons.

Examples: PSV, Pumps, Electrical motors, etc.

Refer to **GS EP EXP 207** for more details about Equipment and to know the classes for which Equipment are required.

7.2 Equipment Creation

In a normal way, the Equipment are created at the same time as the Functional Locations (field 'Install Equipment' in the 'FL' Template).

Nevertheless, the Template named **11-PM_Template_Equipment (Vx.y).xls** is available to create Equipment.

This Template may be used in two cases:

- When the Equipment has not been created at the same time as the Functional Locations.
- To create Equipment located on specific Functional Locations (as workshops and warehouses for example).

These Functional Locations have the specific characteristic of being able to receive several Equipment simultaneously. It is consequently not possible to declare such Equipment in the 'FL' Template.

7.3 Equipment Identification in the Templates

Equipment are automatically codified by UNISUP/SALSA during creation.

As a consequence, the Equipment codes are usually not known when the Templates are compiled.

To simplify the completion of some Templates (essentially BOM Assignment and Equipment Classification), it's possible to identify an Equipment by its Functional Location (where it is or will be located).

7.4 EQ General Data

The following data shall be populated in the sheet "Equipment".

Field	Description/Comments	Format	LoV	
Equipment description		C(40)		
Class	FL Class (GS EP EXP 207)	C(18)	X	
Weight	Weight of the object in Kg.	N(10,2)		
Manufacturer	Manufacturer Name	C(30)	X	
Manufacturer Part Number	Reference of the Object for the Manufacturer	C(30)		
Manufacturer Model Number	Model identification (Type)	C(20)		
Manufacturer Serial Number		C(30)		
Year of Construction		N(4)		
Month of Construction		N(2)		
Acquisition Date		DD/MM/YYYY		
FL Code	Functional Location Code	C(40)		
Installation Date		DD/MM/YYYY		
Construction type	Assembly code, see below.	C(18)		



7.4.1 Equipment description:

The Equipment description shall mention the technical function of the equipment (for example the class description).

7.4.2 Class:

The classes allow identifying the different categories of materials referenced in UNISUP/SALSA.

- electric motors
- horizontal centrifugal pumps
- pressure safety valves
- pressure transmitters
- etc.

The ME/IE must refer to the list of values provided by the COMPANY.

7.4.3 Manufacturer Data:

These data come from the Manufacturer's documentation.

Manufacturer Name:

The Manufacturer Name must be completed by the ME/IE by using the list of values provided by the COMPANY.

If new Manufacturers are needed, the names will be proposed by the ME/IE and validated by the COMPANY.

Part Number:

This is the reference given to the object by the manufacturer.

Model number:

This is the model identification (type) for the object.

Serial Number:

The serial number is the number assigned by the manufacturer for an individual object.

7.4.4 Acquisition Date:

Specific to Total E&P Indonesia.

This date is used to store the expired date of Migas certificate (recertification purpose).

7.4.5 FL Code:

This is the complete code of the Functional Location where the Equipment must be located.

7.4.6 Installation Date:

This is the date of the installation of the Equipment on the Functional Location. If it's not informed, the Equipment creation date will be used as installation date.

7.4.7 Construction type:

This field allows allocating a BOM (list of spare parts) to the FL by use of an **Assembly code**.

It can be used when the required BOM already exists in UNISUP/SALSA. In this case, the list of the reusable BOM is provided to the ME/IE by the COMPANY.

The link between BOM and FL is usually done with the Template BOM or BOMAss.

8. Classification

8.1 General

The classification is the assignment of a Class and characteristics values to Technical objects (FL and Equipment).

The **GS EP EXP 207** gives the main rules for classes' assignment.

The COMPANY provides the **Referential for technical objects classification in UNISUP/SALSA**. This Referential contains:

- The list of classes.
- The list of characteristics with their format.
- The list of characteristics allowed per class.
- The list of allowed values per concerned characteristic.

The FL and EQ can be classified with the 'FL' Template but three other Templates are available for classifying the Technical Objects:

- **32-PM_Template_TO Classification (Vx.y).xls**, for Functional Location and Equipment
- **30-PM_Template_FL Classification (Vx.y).xls**, for Functional Location
- **31-PM_Template_EQ Classification (Vx.y).xls**, for Equipment

Those files are used both for implementing the classes on FL/Equipment and their attached characteristics values.

- The 'TOClass' Template presents several advantages:
 - It can be used in most of the cases:
 - to classify a FL alone (no EQ installed),
 - to classify a FL and its EQ,
 - to classify an EQ alone by using its code.
 - It contains three sheets, thus it allows processing more data.
- The 'FLClass' Template must be used to classify a FL without classifying the EQ located on it.
- The 'EQClass' Template must be used to classify only an EQ when its code is unknown (the EQ must be identified by its FL).

Specific to inspection: For some classes (e.g. Piping, Corrosion monitoring related classes) it is mandatory to assign some of the characteristics defined in the **GS EP EXP 207** since those will cascade down to the Measuring Points to allow calculation to be performed within the

system. These characteristics are as is identified "TO_0nnnnnn" in the reference documents "UNISUP_InspMPs_Route(v...).xls" and "Procedure for the creation of Written Scheme of Examination.doc".

8.2 TO Classification

The TO Classification data shall be populated by the ME/IE in the sheet "**TO Classification(1)**" for each FL (Tags) having a class in the FL Template. If the number of lines exceeds the limit of Excel (65 536 lines today), the other sheets "**TO Classification(2)**" and "**TO Classification(3)**" can be used.

This Template can also be used to classify already existing technical objects in UNISUP/SALSA.

This Template allows classifying both FL and EQ.

Field	Description/Comments	Format	LoV	
FL code or Equipment code	Functional Location Code or Equipment Code	C(40) C(18)		
Class	Class Code	C(18)	X	
Characteristic	Characteristic Code	C(30)	X	
Value	Characteristic Value	C(30)		

When several lines are needed to classify an object (more than one characteristic value) the header data (FL Code or EQ Code and Class) must be repeated on each line.

To classify an object without characteristic value, one line with the header data is enough.

8.2.1 FL Code or Equipment Code:

Enter only one code:

- The FL code to classify the FL and the EQ located on it (if there is one).
- The EQ code to classify only the EQ.

8.2.2 Class:

Refer to the **Referential for technical objects classification in UNISUP/SALSA**.

8.2.3 Characteristic:

Refer to the **Referential for technical objects classification in UNISUP/SALSA** to get the characteristics codes (TO_nnnnnnn) and to know the list of allowed characteristics per class.

8.2.4 Value:

If possible, a value shall be filled in for each characteristic declared in the class. Some characteristics are mandatory.

Refer to the **Referential for technical objects classification in UNISUP/SALSA** to identify the mandatory characteristics and to get the requirements for the values (format, number of characters, number of decimals, restrictive list of values, etc.).

8.3 FL Classification

The FL Classification data shall be populated by the ME/IE in the sheet "**FL Classification**" for each FL (Tags) having a class in the FL Template.

This Template can also be used to classify already existing FL in UNISUP/SALSA.

Field	Description/Comments	Format	LoV	
FL Code	Functional Location Code	C(40)		
Class	Class Code	C(18)	X	
Characteristic	Characteristic Code	C(30)	X	
Value	Characteristic Value	C(30)		

When several lines are needed to classify a FL (more than one characteristic value) the header data (FL Code and Class) must be repeated on each line.

To classify a FL without characteristic value, one line with the header data is enough.

8.3.1 Class, Characteristic Code and Value:

See "TO Classification".

8.4 EQ Classification

The EQ Classification data shall be populated by the ME/IE in the sheet "**EQ Classification**" for each FL having a class in the FL Template and for which an Equipment is installed.

This Template can also be used to classify already existing Equipment in UNISUP/SALSA (in this case, the Equipment numbers are known).

Field	Description/Comments	Format	LoV	
FL code or Equipment code	Functional Location Code or Equipment Code	C(40) C(18)		
Class	Class Code	C(18)	X	
Characteristic	Characteristic Code	C(30)	X	
Value	Characteristic Value	C(30)		

When several lines are needed to classify an Equipment (more than one characteristic value) the header data (FL Code or EQ Code and Class) must be repeated on each line.

To classify an Equipment without characteristic value, one line with the header data is enough.

8.4.1 FL Code or Equipment Code, Class, Characteristic Code and Value:

See "TO Classification".

9. Bills of material

9.1 General

A Bill of material (**BOM**) is a list of the spare parts available to maintain a technical object (FL or Equipment).

The **GS EP EXP 205** specification gives the guidelines for the spare parts data definition:

- The spare parts basic data shall be defined in accordance with the **GS EP EXP 205**. These data will be implemented in the MM (Material Management) module of UNISUP/SALSA.
- The list of spare parts by FL/Equipment shall be defined by the ME in accordance with the **GS EP EXP 205** specification and will be loaded in the PM (Plant Maintenance) module.

Three different objects are used in UNISUP/SALSA to create the BOM:

- **The Main-Assembly.**

This is the header of the BOM which is linked to the technical objects.

- **The Sub-Assembly.**

It represents a sub-part of the technical object (1st stage compressor for example) or a technical grouping (bearings, safety devices, etc.) and it can be used to structure the BOM in manageable individual parts.

It's strongly recommended to use Sub-assemblies when the number of spare parts in the BOM is more than ten.

Sub-Assemblies should be avoided for grouping a very small number of spare parts.

- **The Material (spare part).**

It's an individual part that can be replaced, and it's managed either in stock or by direct purchase.

Note:

*In the BOM, both Sub-Assemblies and Materials are called **Components**.*

Example of BOM without Sub-Assembly:

AMK/AMP2 /GAS/COMP /46-LT-5732A		LEVEL TRANSMITTER	
1607612	O-RING, ADAPTER PN:0	2	SET
1607609	O-RING COVER PN:3031-0232-0001	2	SET
1653492	TRANSMITTER, DIFF PRE ±0.62B 3161/2"+S=1M	1	PC
1607608	BOARD SMART ELECTRONIC	1	PC
1607611	O-RING, FLANGE (SET OF 12) PN:03031-0234-	2	SET
1607613	KIT, ZERO/SPAN	1	SET
1650443	METER DISPLAY 0103	1	PC
1607610	O-RING, MODULE	2	SET
1650444	MODULE SENSOR 0023	1	PC

Functional Location

Material

Example of BOM with Sub-Assemblies:

AMK/AMP2 /GAS/COMP /46-XA-573A		ELECTRICAL MOTOR	
6005277	HIGH VOLTAGE ELECTRICAL MOTOR	SA	
4610428	Bearing	I	1 ASS
1650855	RING SE	L	2 PC
1650856	RING SE	L	2 PC
1650853	BEARING SLEEVE DE DIAM=250	L	1 PC
1650854	BEARING SLEEVE NDE DIAM=251	L	1 PC
4610429	Safety device	I	1 ASS
1608668	PROBE, AIR DIA 6MM	L	3 PC
1650858	PROBE T	L	4 PC
1650101	DETECTOR, OR ELECT MOTOR 11KV	L	1 PC
1650102	PROBE, TEMP. OEM BEARING FOR MOTOR 11KV	L	1 PC
1650859	AIR COOLER WATER COOLED2 ELEC MOTOR 11KV	L	1 PC
4610430	Space heater	I	1 ASS
1650857	HEATER SPACE 2 ELEC MOTOR 11KV	L	1 PC

Functional Location

Sub-Assembly

Equipment

Material

The main Template for BOM is named **20-PM_Template_BOM (Vx.y).xls**. This Template allows creating the BOM and linking them to the technical objects.

It contains two sheets:

- **BOM** → BOM Descriptions
- **BOM Assignment** → Assignment of BOM to technical objects (FL and EQ)

Another Template named **21-PM_Template_BOM Assignment (Vx.y).xls** is also available to link the BOM to technical objects.

9.2 BOM Creation (Template BOM)

The following data shall be populated in the sheet "BOM".

Field	Description/Comments	Format	LoV	
Assembly Code		C(18)		
Assembly Description		C(40)		
Item	Sort number.	N(4)		
Item category	Type of component: • I = Sub-Assembly • L=Material)	C(1)	X	
Component	Sub-Assembly code or Material code.	C(18)	X	
Quantity	Number of components	N(10,3)		

Refer to the user's guide 'UG Maintenance & Inspection Templates for UNISUP_SALSA(v20xx.1).doc' for detailed instructions on how to fill this Template.

9.2.1 Assembly code:

This is a unique code for Main or Sub-Assembly defined by the ME (*this code will be kept as a secondary reference for the assembly in UNISUP/SALSA*).

Assembly codification rule is provided by the COMPANY.

9.2.2 Assembly Description:

For a Main-Assembly, the description should contain information related to the technical objects concerned by the BOM (as class, manufacturer, model, etc.).

For a Sub-Assembly, this is the description of the sub-part or the technical grouping.

9.2.3 Item:

The Item is a number which allows sorting the components in the BOM.

It's recommended to increment this number by 10 to allow future insertions.

9.2.4 Item category:

This field identifies the type of the BOM component:

- I → the component is a Sub-Assembly
- L → the component is a Material

9.2.5 Component:

When the component is a Sub-Assembly, this field must contain the Sub-Assembly code as it is declared in another line in the Template (column 'Assembly Code').

When the component is a Material, this field must contain the Material code as it is declared in UNISUP/SALSA (it must already exist in UNISUP/SALSA).

9.2.6 Quantity:

When the component is a Sub-Assembly, the quantity must be "1" (one).

When the component is a Material, the quantity is the number of this spare part installed on each technical object concerned by the BOM.

9.3 BOM Assignment (Templates BOM and BOMASS)

The BOM shall be assigned to the FL or Equipment through the Main-Assembly.

Important:

- A BOM cannot be assigned to a Functional Location when an Equipment can be located on it (Equipment installation allowed).
- In this case, the BOM must be assigned to the Equipment.

The following data shall be populated in the sheet "BOM Assignment".

Field	Description/Comments	Format	LoV	
Assignment Type	"FL" or "EQ"	C(2)		
FL code or Equipment code	Functional Location Code or Equipment Code	C(40) C(18)		
Assembly	Main-Assembly Code	C(18)		

9.3.1 Assignment Type

To define the type of the object concerned by the BOM:

- **FL** → the BOM is assigned to a Functional Location
- **EQ** → the BOM is assigned to an Equipment

9.3.2 FL Code or Equipment Code:

In case of FL Assignment, the complete code of the Functional Location must be entered.

In case of EQ Assignment, give the code of the Equipment if it is known; otherwise give the code of its Functional Location.

Refer to §7.3 for more explanations about Equipment Identification.

9.3.3 Assembly:

Code of the Main-Assembly as it is defined in the Template for the BOM Creation or as it is stored in UNISUP/SALSA.

10. SAP Documents

10.1 General

A SAP Document is an object that can be used to link one or several external documents (Word, Excel, PowerPoint, PDF, etc.).

- The external document linked to a SAP Document is not uploaded in the SAP system. Only the complete filename (with path) is stored in SAP.
- A modification of the document content in the original source is immediately reflected in the SAP Document.
- Several Functional locations and/or Equipment may refer to the same SAP Document, i.e. to the same external document(s).
- An external document can only be opened when the user has access to its physical storage (Windows access rights).
- The changes of physical location of an external document (path and/or filename) will require updates of SAP Document links to maintain the accessibility.

The Template for SAP Documents is named **35-PM_Template_Documents (Vx.y).xls** and contains four sheets:

- **Paths** → Folders where external documents are stored
- **Documents** → SAP Documents General Data
- **Doc. Texts** → SAP Documents long descriptions
- **Doc. Assignment** → To link SAP Documents to technical objects

10.2 Folders

The sheet "**Paths**" allows defining the folders where the external documents are stored.

Field	Description/Comments	Format	LoV	
Path Reference		C(20)		
Path Address		C(130)		

10.2.1 Path Reference:

This Reference is a temporary one used to identify the folders in the other sheets of the Template.

This field is defined by the ME and must be unique in the Template.

10.2.2 Path Address:

This is the complete path of the folder (i.e. **W:\UNISUP\DOC\Procedures**)

10.3 SAP Documents General Data

The following data shall be populated in the sheet "**Documents**":

Field	Description/Comments	Format	LoV	
Document Type	Complete reference of the SAP Document	C(3)	X	
Document Number		C(25)		
Document Part		C(3)		
Document Description		C(40)		
Authorization Group		C(3)	X	
Application	Identification of the first external document.	C(3)	X	
Path Reference		C(20)		
File Name		C(40)		
Application ⁽¹⁾	Identification of the second external document.	C(3)	X	
Path Reference ⁽¹⁾		C(20)		
File Name ⁽¹⁾		C(40)		

(1) These fields are used only when a second external document must be linked to the SAP Document.

10.3.1 Document Type:

This field categorizes the SAP Documents according to their usage.

Refer to the list of values provided by the COMPANY.

10.3.2 Document Number:

The syntax/naming convention to respect for the main reference of the SAP Document is **FF_XXXXXXXXXXXXXXXXXXXXXX**, where:

- **FF** The first 2 digits indicate the affiliate,
This code will be provided by the COMPANY.
- **XXXXXXXXXXXXXXXXXXXXXX** is free text

This reference must be unique in the Affiliate.

10.3.3 Document Part:

The Document parts can be used to divide large documents into several pages.

This field is usually not filled in.



10.3.4 Authorization Group:

This field allows limiting the modifications of the SAP Document to the authorized persons.
Refer to the list of values provided by the COMPANY.

10.3.5 Application:

It determines the application able to open the external document (Word, Excel, PowerPoint, Acrobat Reader, etc.).

Refer to the list of values provided by the COMPANY.

10.3.6 Path Reference:

This is the Reference of the folder where the external document is stored as declared in the sheet "Paths".

10.3.7 File Name:

This is the name (with extension) of the external document.

10.4 SAP Documents Long Description

Additional descriptions concerning SAP Documents can be stored in UNISUP/SALSA as free text.

If needed, these data shall be populated in the sheet "Doc. Texts".

Field	Description/Comments	Format	LoV	
Document Type	Complete reference of the SAP Document as declared in the sheet "Documents"	C(3)	X	
Document Number		C(25)		
Document Part		C(3)		
Line number	Line number	N(3)		
Text	One line of text	C(64)		

10.5 SAP Documents Assignment

The SAP Documents shall be assigned to the FL or Equipment.

The following data shall be populated in the sheet **"Doc. Assignment"**.

Field	Description/Comments	Format	LoV	
Assignment Type	"FL" or "EQ"	C(2)		
FL code or Equipment code	Functional Location Code or Equipment Code	C(40) C(18)		
Document Type	Complete reference of the SAP Document as declared in the sheet "Documents"	C(3)	X	
Document Number		C(25)		
Document Part		C(3)		
Document Version		N(2)		

10.5.1 Assignment Type

To define the type of the object concerned by the SAP Document:

- **FL** → the SAP Document is assigned to a Functional Location
- **EQ** → the SAP Document is assigned to an Equipment

10.5.2 FL Code or Equipment Code:

In case of FL Assignment, the complete code of the Functional Location must be entered.

In case of EQ Assignment, give the code of the Equipment if it is known; otherwise give the code of its Functional Location.

Refer to §7.3 for more explanations about Equipment Identification.

10.5.3 Document Version:

This field must contain the version of the SAP Document (useless if it's zero) when it's not a new one (not declared in sheet **"Documents"** but already existing in UNISUP/SALSA - list provided by the COMPANY).

11. Objects Links

11.1 General

An Object link is a relation between two Functional Locations.

The Objects Links are mainly used by Inspection in order to connect the safety devices (e.g. PSV) with the Equipment that they are protecting.

An Object Network is a collection of links which allows obtaining various views of Functional Locations. These views can cut across the Functional Locations hierarchy.

The Template for Objects Links is named **38-PM_Template_Objects_Links (Vx.y).xls**.

11.2 Objects Links Data

The following data shall be populated in the sheet "Objects Links".

Field	Description/Comments	Format	LoV	
Link Reference		C(18)		
Link Category		C(1)	X	
Link Description		C(40)		
Network Identification		C(8)	X	
Link from FL		C(40)		
Link to FL		C(40)		
Link Object is a FL		C(40)		
Number		N(4)		
Valid From		DD/MM/YYYY		
Valid To		DD/MM/YYYY		
Medium		C(6)	X	
Relationship type possible		N(1)	X	
Relationship type used		N(1)	X	
Authorization Group		C(4)	X	

11.2.1 Link Reference:

The Link reference must be unique.

This code must contain the Tags of the two Functional Locations separated by a dash (e.g. **6DA1150 - 6PSV11004**).



11.2.2 Link Category:

The Link Category identifies the type of link.

Refer to the list of values provided by the COMPANY.

11.2.3 Network Identification:

This is the reference of the Object Network in which the link is to be created.

Refer to the list of values provided by the COMPANY.

11.2.4 Link from FL:

This is the code of the first Functional Location in the link.

11.2.5 Link to FL:

This is the code of the second Functional Location in the link.

Remark:

The order of the objects in the fields 'Link from' and 'Link to' doesn't define the direction in which the medium is transferred. These fields only specify the two objects connected by the link.

You can specify the direction of the transfer with the information 'relationship type used'.

11.2.6 Link Object is a FL:

When the link between the two Functional Locations is declared as Functional Location in UNISUP/SALSA, enter here the code of this Functional Location.

11.2.7 Number:

This number allows creating several links between the two same Functional Locations. By default, the value 1 is set.

11.2.8 Valid From:

Indicate here the date of the beginning of validity of the link. If this date is not populated in the Template the creation date will be applied.

11.2.9 Valid To:

If the link is not permanent, indicate here the date of the end of validity.

11.2.10 Medium:

This is the reference of the medium (water, oil, gas, electricity, air, etc.) transferred through the link.

Refer to the list of values provided by the COMPANY.

11.2.11 Relationship type possible:

This indicator shows how the link can be used with two possible values:

- 1 → One-Way

The link can be used in only one direction.

- **2** → Two-Way (default value).

The link can be used in the two directions.

11.2.12 Relationship type used:

This indicator shows how the link is used with three possible values:

- **0** → Not used
- **1** → One-Way (default value when the relationship type possible is 1).

The link is used in only one direction. The medium is always transferred from the first Functional Location (Link from FL) to the second one (Link to FL).

- **2** → Two-Way (default value when the relationship type possible is 2).

The link is used in the two directions. The medium is transferred backwards and forwards between the two Functional Locations.

This value is not allowed when the relationship type possible is 1.

11.2.13 Authorization Group:

This field allows limiting the modifications of the Objects Links to the authorized persons.

Refer to the list of values provided by the COMPANY.

12. Maintenance Measuring Points

12.1 General

A Measuring Point (MP) allows recording information relative to a Functional Location or an Equipment during its life (like running hours, temperatures, pressures, thicknesses, etc.).

In Maintenance, the Measuring Points are mainly used to manage two kinds of **counters** for the rotating machines:

- the running hours
- the number of starts
- Counters are specific Measuring Points which record only increasing values. They may be used to manage counter-based preventive maintenance.



The Template for Maintenance Measuring Points is named

40-PM_Template_Measuring_Points (Vx.y).xls and contains four sheets:

- **Measuring Points** → Measuring Points general data
- **MP Texts** → MP long description
- **MP Classification** → MP Classification
- **Measurement Documents** → MP Measurement Documents

12.2 Measuring Points General Data

The following data shall be populated in the sheet "**Measuring Points**".

Field	Description/Comments	Format	LoV	
Measuring Point External Reference		C(40)		
Measuring Point Object	"IFL" or "IEQ"	C(3)		
FL code or Equipment code	Functional Location Code or Equipment Code	C(40) C(18)		
Measuring Point Category		C(1)	X	
Measuring Point is Counter	"X" to define a Counter	C(1)		
Class		C(18)		
Measuring Point Position		C(20)		
Measuring Point Description		C(40)		
Characteristic		C(30)	X	
Code Group ⁽¹⁾		C(8)		
Valuation Code Sufficient ⁽¹⁾		C(1)		
Authorization Group		C(4)	X	
Counter Overflow Reading		C(22)		
Annual Estimate		C(22)		
Measurement Date	Initial Measurement Document	DD/MM/YYYY		
Read by		C(12)	X	
Counter Reading		C(22)		
Measurement Reading		C(22)		
Valuation Code ⁽¹⁾		C(4)		
Measurement Document Text		C(40)		



(1) These fields are useless for Maintenance Measuring Points and are not described in this chapter (they are only relevant for Inspection Measuring Points).

12.2.1 Measuring Point External Reference:

The Measuring Point External Reference is a temporary reference used for identifying the Measuring Points in the other sheets of the Template (e.g. 'MP Classification') or in the other Templates (e.g. 'Measurement Documents').

This field is defined by the ME and must be unique.

12.2.2 Measuring Point Object:

To define the type of the object where the Measuring Point is attached:

- **IFL** → the Measuring Point is attached to a Functional Location
- **IEQ** → the Measuring Point is attached to an Equipment

12.2.3 FL Code or Equipment Code:

In case of FL attachment, the complete code of the Functional Location must be entered.

In case of EQ attachment, give the code of the Equipment if it is known; otherwise give the code of its Functional Location.

Refer to §7.3 for more explanations about Equipment Identification.

12.2.4 Measuring Point Category:

This field defines the type of Measuring Point and is generally equal to "M".

Refer to the complete list of values provided by the COMPANY.

12.2.5 Measuring Point is Counter:

Put "X" in this field when the Measuring Point is a counter.

12.2.6 Class:

Refer to the list of values provided by the COMPANY.

The class is optional but a specific class '**COUNTER**' must be assigned to the counters for which a checking of the recordings must be activated in UNISUP/SALSA.

12.2.7 Measuring Point Position:

The Measuring Point Position indicates where the measurements have to be taken.



12.2.8 Characteristic:

The characteristic allows qualifying the measurements done for the Measuring Point (hours, °C, bar, mm, etc.).

Refer to the list of values provided by the COMPANY.

The characteristics for the main counters used by the Maintenance are:

- **RUNNING_HOURS** → For running hours
- **NUMBER_STARTS** → For number of starts

12.2.9 Authorization Group:

This field allows limiting the modifications of the Measuring Point to the authorized persons.

Refer to the list of values provided by the COMPANY.

12.2.10 Counter Overflow reading (only for counters):

For counter with a limit, the counter overflow reading is equal to the first value not recordable.

e.g. For a counter with 5 digits, the maximum value is 99999, thus the counter overflow reading is 100000 ($= 10^5$).

12.2.11 Annual Estimate (only for counters):

This information corresponds to the estimated consumption of the counter during one year.

Note that it will be required by UNISUP/SALSA for the scheduling of a maintenance plan (preventive maintenance) based on the counter.

12.2.12 Initial Measurement Document:

The declaration of the initial Measurement Document is mandatory for the counters related to maintenance plans.

Use the sheet 'Measurement Documents' if several records must be entered for a Measuring Point.

Measurement Date:

Date of the measurement (format DD/MM/YYYY).

Read by:

Name of the person (or the company) who has taken the measurement.

Counter Reading (only for counters):

Value read on the counter at the measurement date.

Measurement Reading (not for counters):

Actual value on the Measuring Point at the measurement date.

Measurement Document Text:

This free text allows giving additional information on the measurement.

12.3 Measuring Points Long Description

Additional descriptions concerning Measuring Points can be stored in UNISUP/SALSA as free text.

If needed, these data shall be populated in the sheet "MP Texts".

Field	Description/Comments	Format	LoV	
Measuring Point External Reference		C(40)		
Line number	Line number	N(3)		
Text	One line of text	C(72)		

12.4 MP Classification

The classes for the Measuring Points are already defined in the sheet 'Measuring Points'.

The Classification sheet (**MP Classification**) shall only be used to enter characteristics values for the Measuring Points.

Field	Description/Comments	Format	LoV	
Measuring Point External Reference		C(40)		
Class	Class Code	C(18)	X	
Characteristic	Characteristic Code	C(30)	X	
Value	Characteristic Value	C(30)		

When several lines are needed to classify a MP (more than one characteristic value) the Measuring Point External Reference must be repeated on each line.

12.4.1 Class:

Must be the same as the one assigned to the Measuring Point in the sheet 'Measuring Points'.

12.4.2 Characteristic:

Refer to the list of values provided by the COMPANY to get the characteristics codes and to know the list of allowed characteristics per class.

12.4.3 Value:

If possible, a value shall be filled in for each characteristic declared in the class. Some characteristics are mandatory.

Refer to the Referential provided by the COMPANY to identify the mandatory characteristics and to get the requirements for the values (format, number of characters, number of decimals, restrictive list of values, etc.).

12.5 Measurement Documents Data

This sheet "Measurement Documents" can be used when more than one record must be entered for a Measuring Point.

The following data shall be populated in the sheet "Measurement Documents".

Field	Description/Comments	Format	LoV	
Measuring Point External Reference		C(40)		
Measurement Date		DD/MM/YYYY		
Read by		C(12)	X	
Counter Reading	Only for Counters.	C(22)		
Measurement Reading	Not for Counters.	C(22)		
Valuation Code ⁽¹⁾		C(4)		
Measurement Document Text		C(40)		

(1) This field is useless for Maintenance Measuring Points and is not described in this chapter (it is only relevant for Inspection Measuring Points).

12.5.1 Measurement Date:

Date of the measurement (format DD/MM/YYYY).

12.5.2 Read by:

This is the name of the person (or the company) who has taken the measurement.

12.5.3 Counter Reading (only for counters):

Value read on the counter at the measurement date.

12.5.4 Measurement Reading (not for counters):

Actual value on the Measuring Point at the measurement date.

12.5.5 Measurement Document Text:

This free text allows giving additional information on the measurement.

13. Measurement Documents

13.1 General

The Measurement Documents are used in UNISUP/SALSA to store the values entered periodically on the Measuring Points.

The Template for Measurement Documents is named

42-PM_Template_Measurement_Documents (Vx.y).xls and contains two sheets:

- **Measurement Documents** → Measurement Documents general data
- **MD Texts** → Measurement Documents long descriptions

This Template can be used to enter historical measurements.

13.2 Measurement Documents General Data

The following data shall be populated in the sheet "**Measurement Documents**".

Field	Description/Comments	Format	LoV	
Measuring Point or Measuring Point External Reference		C(12) C(40)		
Measurement Document		N(4)		
Measurement Date		DD/MM/YYYY		
Read by		C(12)	X	
Counter Reading	Only for Counters.	C(22)		
Measurement Reading	Not for Counters.	C(22)		
Valuation Code ⁽¹⁾		C(4)		
Measurement Document Text		C(40)		

(1) This field is useless for Maintenance Measuring Points and is not described in this chapter (it concerns only Inspection Measuring Points).

13.2.1 Measuring Point or Measuring Point External Reference:

The Measuring Point can be identified by its UNISUP/SALSA code or by its external reference as declared in the Measuring Points Template.

13.2.2 Measurement Document:

This (sequential) number allows creating several Measurement documents per Measuring Point and to make a link with long text in sheet "MD Texts".

13.2.3 Measurement Date:

Date of the measurement (format DD/MM/YYYY).

13.2.4 Read by:

Name of the person (or the company) who has taken the measurement.

13.2.5 Counter Reading (only for counters):

Value read on the counter at the measurement date.

13.2.6 Measurement Reading (not for counters):

Actual value on the Measuring Point at the measurement date.

13.2.7 Measurement Document Text:

This free text allows giving additional information on the measurement.

If the short text is not enough, use long text in sheet "MD Texts".

13.3 Measurement Documents Long Description

Additional descriptions concerning Measuring Documents can be stored in UNISUP/SALSA as free text.

If needed, these data shall be populated in the sheet "MD Texts".

Field	Description/Comments	Format	LoV	
Measuring Point or Measuring Point External Reference		C(12) C(40)		
Measurement Document		N(4)		
Line number	Line number	N(3)		
Text	One line of text	C(64)		

14. Counters

The Template for Maintenance Measuring Points can be used to prepare the data for counters, but the Template named **45-PM_Template_Counters (Vx.y).xls** is more efficient.

This Template contains three sheets:

- **Routes** → Lists of counters
- **Counters** → Counters general data and route assignment
- **Measurement Documents** → Measurement Documents (counter readings)

The data to be populated by MIEC is identical to the one required for the other Templates relating to Measuring Points.

15. Inspection Measuring Points

15.1 General

- The Inspection Measuring Points are used to manage quantitative (e.g. wall thickness measurement, pressure test, etc.) and qualitative (e.g. condition of equipment coating, evaluation of FAME+ damages, etc.) inspection results.
- The guidelines issued by COMPANY Inspection Specialists must be used by IE to create relevant Inspection Measuring Points.

Those reference documents are:

- “UNISUP_InspMPs_Route(v...).xls” where examples of measuring points to be created against various FL classes are given,
- “Procedure for the creation of Written Scheme of Examination.doc” where the numbering convention is described.
- An Inspection Measuring Points is created against a Functional Location, never against equipment.
- An Inspection Route is a list of Measuring Points, concerning one or several Functional Locations, for which a particular Scope of inspection has to be performed at a certain point of time (meaning at a given frequency).
- For FAME+ assessed equipments the routes may be defined among the following inspection scopes:
 - **Non-Intrusive Major Inspection (NI-MAJ),**
 - **Intrusive Major Inspection (IN-MAJ).**

This type of route contains all the external and internal Measuring Points.

- **Non-Intrusive Intermediate Inspection (NI-INT);**
- The Measuring Points are sorted in the Routes in order to be displayed in the Inspection Workbook (Excel tool to simplify Measurements readings for UNISUP/SALSA) and then inspected in the right sequence.

The reference document “Procedure for the creation of Written Scheme of Examination.doc” provides guidelines to define the sequence.

The Template for Inspection Measuring Points is named

90-INSP_Template_Measuring_Points_&Routes (Vx.y).xls and contains three sheets:

- **Routes** → Inspection Routes
- **Points & links to routes** → Measuring Points data and Routes assignment
- **Measurement Documents** → Measurement Documents

15.2 Inspection Routes

The following data shall be populated in the sheet "Routes".

Field	Description/Comments	Format	LoV	
Route Name		C(20)		
Route Description		C(40)		

15.2.1 Route Name:

The Route name is the code of the Inspection Route according to the recommended naming convention (refer to Appendix 2).

This code must be unique within the affiliate (take care of the existing ones).

15.2.2 Route Description:

The Route description must also respect the recommended naming convention (refer to Appendix 2) and must be unique within the affiliate.

15.3 Measuring Points data and Routes assignment

For each Measuring Point to be created, the sheet "**Points & Link to Routes**" allows gathering:

- its general data,
- its classification data,
- its assignments to routes,
- its initial measurement document (baseline), where appropriate.

Field	Description/Comments	Format	LoV	
General data				
Measuring Point Reference		C(20)		
Functional location		C(40)		
Measuring Point Position		C(20)		
Measuring Point Description		C(40)		
Measuring Point Class (Type)		C(18)	X	
Measuring Point Long Description		Unlimited		
Characteristic		C(30)	X	
Code Group		C(8)	X	
Authorization Group		C(4)	X	
Classification data (characteristics values)				
TO_1000100	Nominal thickness (Tman) (mm)	N(4,2)		
TO_1000200	Analysis thickness (Tc) (mm)	N(4,2)		
TO_1000300	Alarm thickness (Us1) (mm)	N(4,2)		
TO_1000400	Alarm thickness (Us2) (mm)	N(4,2)		
TO_0010400B	Nominal diameter (")	N(4,2)		
TO_2001300	Alarm thickness (PVV112) (mm)	N(4,2)		
TO_1000600	Type of active chemical	C(30)		
ISM	NDT Technique	C(30)	X	
Routes Assignment				
Route n	Route Name.	C(20)		
Sequence n		N(4)		
Baseline (Initial Measurement Document)				
Measurement Date		DD/MM/YYYY		
Read by		C(12)		
Measurement Reading		C(22)		
Valuation Code		C(4)		
Measurement Document Text		C(40)		



15.3.1 General Data

15.3.1.1 Measuring Point Reference

This is a temporary reference used for identifying the Measuring Points during the Engineering project.

This field is defined by the IE and must be unique.

15.3.1.2 Functional location

In the case of items managed within FAME+. Measuring points are created either at the Main Tag or at sub-Tag levels as shown on scheme in Appendix 1 for typical multipart vessel.

For Groups of Piping the measuring points are created at the Main Tag level.

15.3.1.3 Measuring Point Position

Refer to Written Scheme of examination for coding the Measuring Point Position.

15.3.1.4 Measuring Point Description

Refer to Written Scheme of examination for coding the Measuring Point Description.

15.3.1.5 Measuring Point Class (Type)

The Class identifies the type of the Measuring Point.

Refer to the list of values provided by the COMPANY and to the reference documents "UNISUP_InspMPs_Route(v...).xls".

15.3.1.6 Measuring Point Long Description

The long description allows giving additional information on the scope of inspection.

It is mandatory for Piping to identify the exact line number.

15.3.1.7 Characteristic

The characteristic is required for Quantitative Measuring Points.

Refer to the list of values provided by the COMPANY and to the reference documents "UNISUP_InspMPs_Route(v...).xls".

15.3.1.8 Code Group

The code group is always "STATUS" for Quantitative Measuring Points.

For the Qualitative Measuring Points, refer to the list of values provided by the COMPANY and to the reference documents "UNISUP_InspMPs_Route(v...).xls".

15.3.1.9 Authorization Group

This field allows limiting the modifications of the Measuring Point to the authorized persons.

Refer to the list of values provided by the COMPANY.

15.3.2 Classification Data

There are three types of characteristics used for Inspection Measuring Points:

- Those which are assigned at the Technical object level and cascade down to the Measuring Points to allow calculation.

These characteristics must not be filled in the Template.

- Those which must be defined at the Measuring Point level.

These characteristics must be filled in the Template.

The characteristics values to be provided depend on the class of the Measuring Point.

Refer to the reference file **UNISUP_Measuring_Points_Classification(V...).xls** to know the characteristics managed per class.

- Those which are calculated by the system.

These characteristics must not be filled in the Template.

The characteristics are defined in the reference documents "UNISUP_InspMPs_Route(v...).xls" and "Procedure for the creation of Written Scheme of Examination.doc".

15.3.3 Routes Assignment

15.3.3.1 Route:

Route name as it is entered in the sheet "**Routes**".

A Measuring Point can be linked up to five different Routes and must be linked to at least one.

15.3.3.2 Sequence:

The sequence number allows sorting the Measuring Points in the Route.

It must be unique within a Route.

15.3.4 Baseline Data

15.3.4.1 Measurement Date:

Date of the measurement (format DD/MM/YYYY).

15.3.4.2 Read by:

Name of the person (or the company) who has taken the measurement.

15.3.4.3 Measurement Reading:

For Quantitative Measuring Point, actual value at the measurement date.

15.3.4.4 Valuation Code:

Inspection result for Qualitative Measuring Point.

15.3.4.5 Measurement Document Text:

This free text allows giving additional information on the measurement.

15.4 Measurement Documents Data

This sheet "**Measurement Documents**" can be used for the Baselines (as on the sheet "**Points & Links to Routes**") and it can also be used to collect several Measurements per Measuring Point (historic).

The following data shall be populated in the sheet "**Measurement Documents**".

Field	Description/Comments	Format	LoV	
Measuring Point Reference		C(40)		
Measurement Date		DD/MM/YYYY		
Read by		C(12)	X	
Measurement Reading		C(22)		
Valuation Code		C(4)		
Measurement Document Text		C(40)		

15.4.1 Measuring Point Reference:

Reference of the Measuring Point as it has been entered in the sheet "**Points & Links to Routes**".

15.4.1.1 Measurement Date:

Date of the measurement (format DD/MM/YYYY).

15.4.1.2 Read by:

This is the name of the person (or the company) who has taken the measurement.

15.4.1.3 Measurement Reading:

For Quantitative Measuring Point, actual value at the measurement date.

15.4.1.4 Valuation Code:

Inspection result for Qualitative Measuring Point.

15.4.1.5 Measurement Document Text:

This free text allows giving additional information on the measurement.

16. Standard Texts

16.1 General

Standard Texts are used to describe Maintenance or Inspection procedures (general instructions to be followed during the execution of an intervention) in UNISUP/SALSA.

They are mainly used for Preventive Maintenance (included in the Task Lists operations) but can also be integrated directly in the Work Orders Operations (Corrective Maintenance for example).

The Standard Texts are defined per affiliate, and can be potentially used on several sites.

The Template for Standard Texts is named **50-PM_Template_Standard_Texts (Vx.y).xls**.

16.2 Standard Texts data

The following data shall be populated in the sheet "Std Texts".

Field	Description/Comments	Format	LoV	
Standard text Code		C(70)		
Line number		N(4)		
Text	One line of text	C(64)		

16.2.1 Standard text code:

The syntax/naming convention to respect is **Y_FF_EQTYPE-TRADE-PERIOD-N°TEXT**, where:

- **FF** indicates the affiliate on 2 digits,
This code will be provided by the COMPANY.
- **EQTYPE** indicates the type of the equipment to be maintained
This code may be built with Class code, Manufacturer type, etc.
Possibly, a Tag can be used for very specific Standard Texts.
- **TRADE** indicates the trade in charge of the operation, limited to 2 digits,
- **PERIOD** indicates the frequencies involved in the procedure (ex: 8000H, 3M, 6M, 12M).
For inspection purpose, as far as the frequency may change (e.g. FAME+ assessed equipments) use the SCOPE of inspection instead of the Period: e.g. NI-INT-01, NI-MAJ-01, etc.
- **N° TEXT**: chronological number.

The Standard Text code must be unique within the affiliate.

16.2.2 Line number:

This chronological number allows sorting out the various lines of the Standard Text.

16.2.3 Text:

It is recommended to start with the safety instructions (general and specific to the intervention).

The maximum length for each text line is 64 digits (the number of lines itself is limited to 9999).

For inspection purpose it is recommended to have the reference number of the schematic, drawing or Isometric in the text, as well as the reference of NDE procedure.

17. Task Lists

17.1 General

A Task List contains all the operations required to manage the preventive maintenance or the inspection of one or several technical objects.

Each operation of a Task List contains:

- a Work Centre (who does it),
- the description of the work to be done (short text, long text, standard texts),
- the estimated number of people and hours,
- the required components (material),
- the concerned frequencies (3M, 6M, 1Y, 1000H, etc.).

In UNISUP/SALSA, the frequencies for preventive maintenance are also named Maintenance Packages.

A Maintenance Strategy groups several maintenance packages.

The packages for a strategy can have different cycle units (for example: month, year) in the same dimension (for example: time).

The Maintenance Strategy determines how UNISUP/SALSA will generate the preventive maintenance or the inspection.

- With a time based strategy, the interventions are scheduled at regular intervals in time (every six months for example).

Three time based strategy are used in UNISUP/SALSA:

- **TIME-1** For Maintenance / Short periods (1 to 8 weeks)
- **TIME-2** For Maintenance / Long periods (1 to 360 months)
- **INSP** For Inspection (1 to 120 months)

- With an activity based strategy, the interventions are scheduled whenever the technical object has reached a defined threshold of activity (every 2000 running hours for example).

Only one activity based strategy exists in UNISUP/SALSA:

- **COUNT** For Maintenance (100 to 120 000 hours)

The Template for Tasks Lists is named **51-PM_Template_Task_Lists (Vx.y).xls** and contains seven sheets:

- **TL Header** → Tasks Lists Headers
- **TL Texts** → Tasks Lists long Descriptions
- **Operations** → Operations
- **Operations Texts** → 1st sheet for Operations Long Description
- **Operations Texts(2)** → 2nd sheet for Operations Long Description
- **Components** → Components for Operations

- **PRT Documents** → PRT Documents for Operations

To be valid, a task List must have one header and at least one operation.

17.2 Task List Header

The header contains general information for the Task List. These data shall be populated in the sheet "TL Header".

Field	Description/Comments	Format	LoV	
Group	Group and Group Counter represent the reference of the Task List.	C(8)		
Group Counter		C(2)		
Description	Task List description	C(40)		
Planning Plant		C(4)	X	
Work Centre	This Work Centre is the default one for the operations.	C(8)	X	
Plant for Work centre		C(4)	X	
Planner Group		C(3)	X	
System Condition ⁽¹⁾		C(1)		
Strategy	TIME-1, TIME-2, COUNT or INSP	C(6)	X	

(1) This field presents in the Template is useless for the moment in UNISUP/SALSA. It is not described in this chapter.

17.2.1 Group:

The naming convention to respect for the Task List Group is **NXXXXYYY** where:

- **N** indicates the affiliate (1 digit),
This code will be provided by the COMPANY.
- **XXXX** is the abbreviation of the technical object class (pump, compressor, vessel, etc.) using 4 digits.
- **YYY** is a chronological number using 3 digits.

A group shall be created for related task lists (generally relating to the same package or type of equipment).

17.2.2 Group Counter:

This is the identification of the task List in the group. It must be unique in the Group and can be numeric (10, 20, 90, etc.) or not.



17.2.3 Specific to inspection

For the equipments that are assessed within FAME+ there is a one to one relationship between a functional location (Main Tag) and a Group of Tasks lists; this means there is a Group of Tasks lists per object to be inspected.

Then, for a given group, there is one counter per scope of inspection (e.g. Counter 10-Non-Intrusive Major Inspection; Counter 20-Intrusive Major Inspection, etc.).

Finally, there is the same frequency (Maintenance package) for all the operations of a counter. Frequencies are fixed after the FAME+ assessment has been made.

The operations would incorporate both inspection intervention (e.g. External inspection + NDT) and maintenance intervention (e.g. Open and clean equipment).

Refer to Appendix 1 to have the schematic overview of Routes/Task list/Inspection Plan.

Naming convention principles are given in Appendix 2. Code and associated description must remain unique within a given affiliate (take care of the existing ones).

Where codification needs to incorporate a letter to identify the Group of Objects, following applies,

- C, for Cathodic protection / Corrosion monitoring,
- V, for Pressure Vessels, Exchangers, Boilers & Heaters,
- S, for Pressure Safety devices,
- P, for Piping,
- L, for Pipelines,
- R, for Structures,
- G, for Liftings,
- T, for Tanks,
- F, for FPSU,

17.2.4 Description:

The description of the individual Task List identified by the Group and the Group Counter shall mention the main function of the task List and the concerned technical objects (or packages).

17.2.5 Planning Plant:

This is the Planning Plant for which the Task List is available.

Refer to the list of values provided by the COMPANY.

17.2.6 Work Centre & Plant for Work Centre:

The Work Centre entered here becomes the default one for the operations of the Task List.

Refer to the list of values provided by the COMPANY.

17.2.7 Strategy:

To define the strategy to be applied:

- **TIME-1** → for time based preventive maintenance with short periods (1 to 8 weeks).
- **TIME-2** → for time based preventive maintenance with long periods (1 to 360 months).
- **COUNT** → for hour based preventive maintenance (100 to 120 000 hours).
- **INSP** → for inspection (1 to 120 months - includes frequencies defined within FAME+).

17.3 Task List Long Description

Additional descriptions concerning Tasks Lists can be stored in UNISUP/SALSA as free text.

If needed, these data shall be populated in the sheet "**TL Texts**".

Field	Description/Comments	Format	LoV	
Group	Task List Reference.	C(8)		
Group Counter		C(2)		
Line number	Line number	N(3)		
Text	One line of text	C(64)		

17.4 Operations

The Tasks Lists Operations data shall be populated in the sheet "**Operations**".

Several Operations can be declared per Task List but at least one operation is necessary to validate a Task List.

Field	Description/Comments	Format	LoV	
Group	Task List Reference.	C(8)		
Group Counter		C(2)		
Operation		N(4)		
Sub Operation ⁽¹⁾		N(4)		
Work Centre	This Work Centre is the default one for the operations.	C(8)		
Plant for WC		C(4)		
Control Key	Always INT	C(4)	X	
Operation description		C(40)		
Work		N(4,1)		
Unit for Work		C(3)	X	
Nb of capacities		N(3)		
Packages (1 to 5)	The first package is mandatory.	C(2)	X	
Standard Text code		C(70)		

(1) This field presents in the Template is not used for the moment in UNISUP/SALSA. It is not described in this chapter.

17.4.1 Group & Group Counter:

These codes represent the Task List reference as they have been entered in the sheet "**TL Header**".

17.4.2 Operation:

It's recommended to increment the operation number by 10 (0010, 0020, etc) to allow future insertions.

17.4.3 Work Centre & Plant for Work Centre:

This Work Centre will be in charge of the operation during the job execution.

Refer to the list of values provided by the COMPANY.

17.4.4 Control Key:

In UNISUP/SALSA, this code allows differentiating the internal operations (done by internal COMPANY workers) and the external ones (done by external workers).

For the moment, the only value allowed for Control Key is **INT** (for Internal Operation).

17.4.5 Operation Description:

The operation description shall contain whole or part of the following information:

- the job to perform (in one word - REVISION, OVERHAUL, CALIBRATION, etc.)
- the concerned part of the technical object,
- the period (6M, 2Y, 2000H, etc.),
- the trade (ME, EL, IN, etc.).

17.4.6 Work:

It is the estimated work required to perform the operation.

17.4.7 Unit for work:

Choose the unit for work among the three values below:

- **HR** → Hours (it's recommended to use this unit)
- **DAY** → Days
- **MIN** → Minutes

17.4.8 Nb of Capacities:

Number of workers needed to perform the job.

17.4.9 Packages (1 to 5):

Refer to the list of values provided by the COMPANY to declare the packages (5 max.) concerned by the operation.

Important:

- At least one package is mandatory for each operation.
- The packages must exist in the strategy of the Task List.
- Give the code of the packages and not the length.

Examples with strategy TIME-2:

Code	Length (in months)
6M	6
1Y	12
18	18
DY	120

17.4.10 Standard Text Code:

This is the code of a Standard Text as it is defined in the Template for the standard texts creation or as it is stored in UNISUP/SALSA.

You can use the sheet "**Operations Texts**" to declare more standard texts for the operation.

17.5 Operations Long Description

You can use the sheets "**Operations Texts**" and "**Operations Texts(2)**" to declare detailed instructions for the operations.

Note that these additional texts are transferred on the works orders generated from the Tasks Lists.

Field	Description/Comments	Format	LoV	
Group	Task List Reference.	C(8)		
Group Counter		C(2)		
Operation	Operation number	N(4)		
Line number	Line number	N(3)		
Standard Text code	On each line, enter either the Standard Text code or the free text.	C(70)		
Text		C(64)		

17.6 Components

You can use the sheet "**Components**" to declare the spare parts needed to perform the operations.

Field	Description/Comments	Format	LoV	
Group	Task List Reference.	C(8)		
Group Counter		C(2)		
Operation	Operation number	N(4)		
Material		C(18)		
Quantity		N(10,3)		

17.6.1 Material:

This is the code of a spare part (material in MM) needed to perform the operation. This material must exist in UNISUP/SALSA.

17.6.2 Quantity:

This quantity represents the number of this spare part needed to perform the operation.

17.7 PRT Documents

You can use the sheet "**PRT Documents**" to link the documents (procedures for example) required to perform the operations.

Field	Description/Comments	Format	LoV	
Group	Task List Reference.	C(8)		
Group Counter		C(2)		
Operation	Operation number	N(4)		
Document Type	Complete reference of a SAP Document	C(3)	X	
Document Number		C(25)		
Document Part		C(3)		
Document Version		N(2)		

17.7.1 Reference of the SAP Document:

This is the complete code of a SAP Document as it has been defined in the Template for the Documents creation (DOC) or as it is stored in UNISUP/SALSA.

The Document Part and the Document Version are useless when they are equal to zero.

18. Maintenance and Inspection Plans

18.1 General

The Maintenance Plans are the mean in UNISUP/SALSA for implementing the preventive maintenance or inspection on the technical objects.

A Maintenance Plan is the association of one or several Functional Locations (where the work must be done), scheduling parameters (when the work must be done) and one or several Tasks Lists (work to be done).

A Maintenance Plan comprises:

- a header including the scheduling parameters,
- one or several Maintenance Items,

A Maintenance Item contains:

- A Functional Location → To define where the intervention must be performed.

- Planning data → Planning Plant, Work Order Type, Activity Type, Planner Group, Work Centre and Priority.
- A Task List → To define the work to be done.

It also allows declaring all the Sub-Tags (Functional Locations in objects list) concerned by the preventive maintenance or inspection.

A Maintenance Plan is defined in only one Maintenance Strategy.

The Template for Plans is named **52-PM_Template_Maintenance_Plans (Vx.y).xls** and contains four sheets:

- **Plan Header** → Plans Headers
- **Items** → Maintenance Items
- **Items Texts** → Items Long Descriptions
- **Objects Lists** → Lists of Functional Locations for Items

18.2 Specific to inspection

18.2.1 General

Inspection plans are created at the Main Tag level (e.g. V-101) also called “Scheduling Tag”, never at Sub-Tag level (e.g. V-101-Water phase, etc.) or Equipment level.

For Lifting equipments, Scheduling Tags will be used to group objects of the same class (refer to **GS EP EXP 207**), example “AMK/AMP2 /COF/LIFT /GENERAL LFTG FIXTURE”.

By exception, an inspection plan will be defined per object when Lifting must be individually managed, i.e. cranes.

Naming convention principles are given in Appendix 2. Code and associated description must remain unique within a given affiliate (take care of the existing ones).

18.2.2 FAME+ to Inspection plans within SAP

For the equipment that are assessed with FAME+ there is one inspection plan (maintenance plan according to the UNISUP/SALSA terminology) per individual object to be inspected. Then there are as many Maintenance items as Scope of inspection (Non-Intrusive Major Inspection; Intrusive Major Inspection, etc.).

The inspection schemes determined with FAME+ must be optimized and converted to Inspection plans in UNISUP/SALSA.

The programme start up date from FAME+ is converted as “Start of cycle”; the identified potential damages and their associated inspection frequency are converted to task lists.

Modelling into SAP (Functional location/Route/Task List/Inspection plan) may be summarized as here below described:

Maint. Item 1 (e.g. NI-MAJ): FL A → task List Group X → Counter X1-Freq 1 → Route 1 (NI-MAJ)

Maint. Item 2 (e.g. IN-MAJ): FL A → task List Group X → Counter X2-Freq 2 → Route 2 (IN-MAJ)

Maint. Item n (e.g. nnnnnn): FL A → task List Group X → Counter Xn-Freq n → Route n (nnnnnn)

Refer to Appendix 1 to have the schematic overview of Routes/Task list/Inspection Plan.

18.3 Plan Header

The header contains general information and the scheduling parameters for the Maintenance Plans. These data shall be populated in the sheet "**Plan Header**".

Field	Description/Comments	Format	LoV	
Maintenance Plan		C(12)		
Strategy	TIME-1, TIME-2, COUNT or INSP	C(6)	X	
Description		C(40)		
Measuring Point	Only one field mandatory for a counter-based plan.	C(12)		
Measuring Point External Reference		C(40)		
Scheduling Indicator		C(1)	X	
Start of Cycle	For time-based plan only.	DD/MM/YYYY		
Start Counter Reading	For hour-based plan only.	C(22)		
Call Horizon		N(3)		
Scheduling Period		N(3)		
Unit for Scheduling Period		C(3)	X	
Authorization Group		C(4)	X	

18.3.1 Maintenance Plan:

For Maintenance Plans, the naming convention to respect for the Code is **NNPPXXXX-YYY** where:

- **NN** indicates the affiliate (2 digits),
This code will be provided by the COMPANY.
- **PP** is the platform number (2 digits),
- **XXXX** is the abbreviation of the technical object class (pump, compressor, vessel, etc.) using 4 digits.



- **YYY** is a chronological number using 3 digits.

For Inspection Plans, refer to Appendix 2.

18.3.2 Strategy:

To define the strategy to be concerned by the Plan:

- For time-based Maintenance Plans → **TIME-1** or **TIME-2**
- For hour-based Maintenance Plans → **COUNT**
- For Inspection Plans → **INSP**

18.3.3 Description:

For Maintenance Plans, the description shall mention the Tag and/or the Class of the Functional Location and the type of preventive maintenance (time-based or hour-based).

For Inspection Plans, refer to Appendix 2.

18.3.4 Measuring Point or Measuring Point External Reference:

In case of hour-based Maintenance Plan, the counter used to manage the preventive maintenance must be declared in the Plan.

The counter can be identified by its UNISUP/SALSA code or by its external reference as declared in the Measuring Points Template.

18.3.5 Scheduling Indicator:

The Scheduling Indicator identifies how the Plan is scheduled.

For time-based Plans (strategies **TIME-1**, **TIME-2** and **INSP**), three values are available:

- **Nothing** → Scheduling by the hours
 $1 \text{ day} = 24 \text{ hours} / 1 \text{ week} = 7 \text{ days} / 1 \text{ month} = 30 \text{ days} / 12 \text{ month} = 360 \text{ days} / 1 \text{ year} = 365 \text{ days}.$
- **1** → Scheduling on set days
Use the day in the month (every 1st of the month for example).
This type of scheduling is recommended for strategies **TIME-2** and **INSP** and not allowed for strategy **TIME-1**.
- **2** → Scheduling by the hours based on working days in the company calendar.

For hour-based Plans (strategy **COUNT**), the only value allowed is **3**:

18.3.6 Start of Cycle:

It is the starting date for a time-based Plan.

If this date is missing, the Plan will have to be scheduled manually (automatic scheduling will not be possible).

- For Inspection Plans and in case of FAME+ assessed Equipment, this date is taken from the FAME+ assessment report.

**18.3.7 Start Counter reading:**

It is the value of the counter used as starting point for an hour-based Plan.

18.3.8 Call Horizon:

The Call Horizon parameter determines when the work orders have to be generated in the system (before the planned dates). It represents a percentage of the time elapsed between two work orders. The higher the percentage, the later the work orders are generated.

18.3.9 Scheduling Period:

It is the sliding period for which UNISUP/SALSA creates calls (planned dates) for the Plan in the system. Then it is possible to see the planned interventions for this period from the current date.

For Maintenance Plans, refer to the Affiliate usages to determine the Scheduling Period.

For Inspection Plans, the Scheduling Period is generally equal to the cycle length (longest frequency). It is the case for FAME+ assessed Equipment. Note hereunder some exceptions:

- For Lifting equipment except cranes, the Scheduling Period must be equal to two cycles.
- For Corrosion monitoring, the Scheduling Period must be equal to 12 months.

18.3.10 Unit for Scheduling Period:

Choose the unit for Scheduling Period among the three values below:

- DAY → Days
- MON → Months
- YR → Years

18.3.11 Authorisation Group:

This field allows limiting the modifications of the Plan to the authorized persons.

Refer to the list of values provided by the COMPANY.

18.4 Items

The Items data shall be populated in the sheet "**Items**".

Several Items can be declared per Plan but at least one Item is necessary to validate the Plan.

Field	Description/Comments	Format	LoV	
Maintenance Plan		C(12)		
Item Number		N(3)		
Item description		C(40)		
Assignment Type	"FL" or "EQ"	C(2)		
FL code or Equipment code	Functional Location Code or Equipment Code	C(40) C(18)		
Planning Plant		C(4)	X	
Planner group		C(3)	X	
Order Type	Always WPM .	C(4)	X	
Activity Type	PS (Maintenance) or RO (Inspection)	C(2)	X	
Main Work Centre		C(8)	X	
Plant for Work Centre		C(4)		
Priority	Always 3 .	C(1)		
Task List Type	Task List Identification.	C(1)		
Task List Group		C(8)		
TL Group Counter		C(2)		
System Condition		C(1)	X	
Route Name	For Inspection Plans only.	C(20)		

18.4.1 Maintenance Plan:

This is the Maintenance or Inspection Plan Code as declared in the sheet "**Plan Header**".

18.4.2 Item Number:

The Item Number is the identification of the Item in the Plan. It must be unique in the Plan.

18.4.3 Item Description:

This Description will appear in the short description of the Work Orders generated from the Maintenance Item.



18.4.4 Assignment Type

To define the type of the object concerned by the BOM:

- **FL** → the BOM is assigned to a Functional Location
- **EQ** → the BOM is assigned to an Equipment

18.4.5 FL Code or Equipment Code:

In case of FL Assignment, the complete code of the Functional Location must be entered.

In case of EQ Assignment, give the code of the Equipment if it is known; otherwise give the code of its Functional Location.

Refer to §7.3 for more explanations about Equipment Identification.

18.4.6 Planning Plant:

It is not necessary to give the Planning Plant. If missing, the Planning Plant of the Functional Location will be automatically used.

Refer to the list of values provided by the COMPANY.

18.4.7 Order Type:

The Order Type must always be **WPM**.

18.4.8 Activity Type:

For Maintenance Plans, the Activity Type is **PS**.

For Inspection Plans, the Activity Type is **RO**.

18.4.9 Priority:

The priority recommended is **3** (waiting for opportunity).

18.4.10 Task List Identification:

The Task List Identification consists of three parts:

- The Task List Type is always **A**
- The Task List Group and the Task List Group Counter.

Give these codes as they are defined in the Template for the Tasks Lists Creation or in UNISUP/SALSA.

The Task List must be in the strategy of the plan.

18.4.11 System Condition:

This indicator specifies the necessary operating conditions to perform the work. The values below are possible:

- **A** → No Effect on Production (no shutdown required)
- **B** → Unit Shutdown Required
- **C** → Gas Production Affected
- **D** → Oil / Liquid Production Affected
- **E** → Water Injection Affected
- **F** → Gas Injection Affected
- **G** → Produced Water Re-Injection Affected
- **H** → Multiple Systems Affected
- **I** → Total Process / Phase Shutdown Required
- **J** → Site / Platform Shutdown Required

18.4.12 Route Name:

For Inspection Plans, the Route Name is mandatory.

18.5 Items Long Description

Additional descriptions concerning Items can be stored in UNISUP/SALSA as free text.

Note that these additional texts are transferred on the works orders generated from the Maintenance Item.

If needed, these data shall be populated in the sheet "**Items Texts**".

Field	Description/Comments	Format	LoV	
Maintenance Plan	Item Identification.	C(12)		
Item Number		N(3)		
Line number	Line number	N(3)		
Text	One line of text	C(64)		

18.6 Objects lists

The objects list is the mean in UNISUP/SALSA to declare all the Functional Locations concerned by the preventive maintenance or the inspection.

The additional Functional Locations for the Items shall be populated in the sheet "**Objects Lists**".

Note that these Functional Locations must be under the main Functional Location (the one declared in the Item) in the hierarchical structure.

For Inspection Plans, it is generally not recommended to use the Objects list functionality because the management of these lists requires resources. When it is valuable to report for individuals the objects may be defined in Objects list since a notification could be raised from that list available in related Work order.

Field	Description/Comments	Format	LoV	
Maintenance Plan	Item Identification.	C(12)		
Item Number		N(3)		
Functional Location	One line of text	C(40)		

18.6.1 Item Identification:

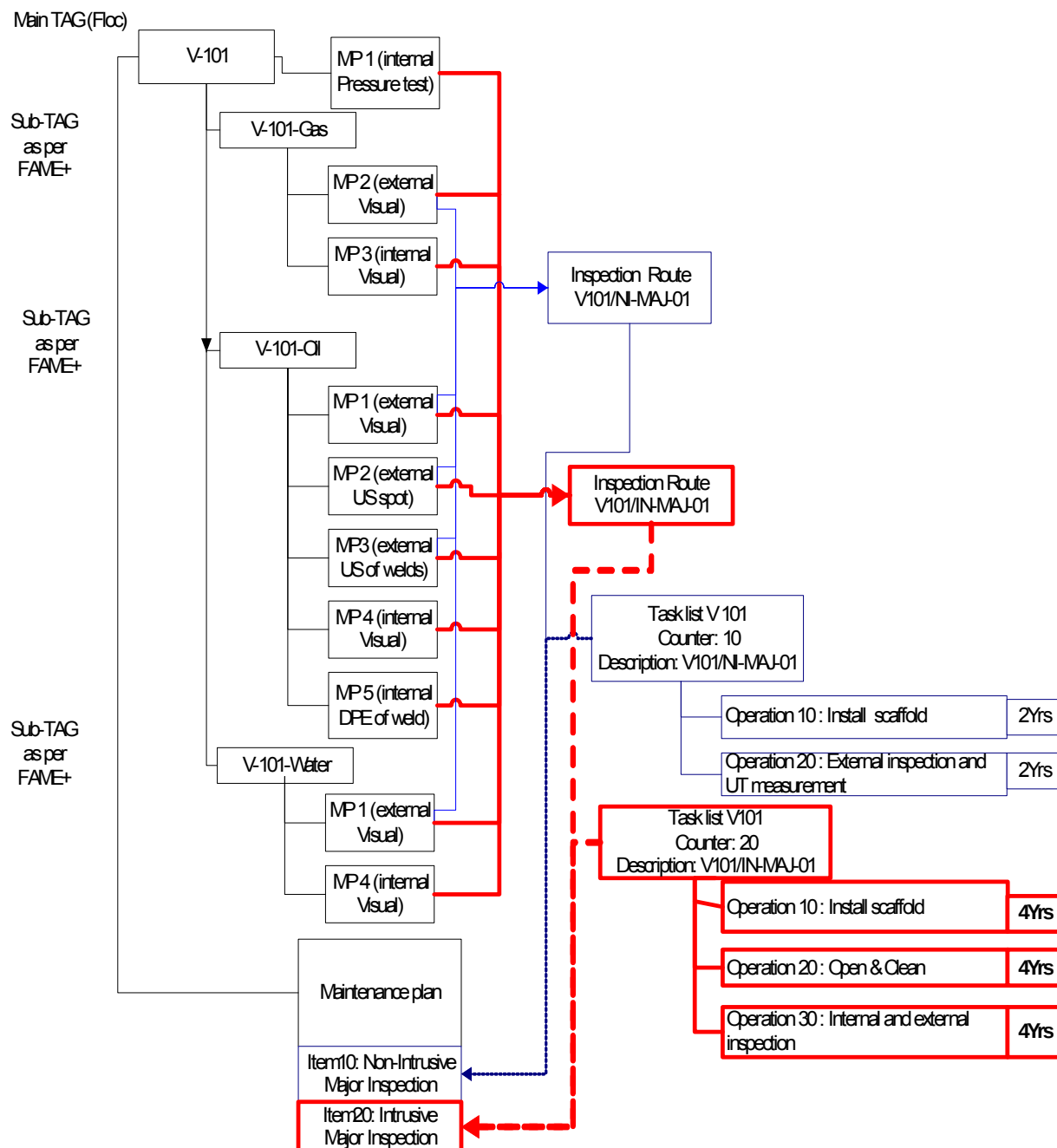
Give the Plan Code and the Item Number as declared in the sheet "**Items**".

18.6.2 Functional Location:

Give here a complete Functional Location Code.

Appendix 1 FAME+ assessed equipments - Links between Measuring Points / Routes / Task List / Inspection Plan

Typical example of a multi-part vessel:



Appendix 2 Recommended Naming convention for Route / Task List / Inspection Plan and examples

Note: For African affiliates (single client) a first digit is used to identify the affiliate, such as A, C, G, or N (Nigeria)	TYPE OF EQUIPMENT		
	VESSELS	PIPING	PSVs
Maintenance Plan code (12 alphanumeric characters)	Equipment TAG Remark: It may be necessary to prefix with the reference of the platform to have unicity of the code	Shorted equipment TAG; for example, IP-_HC-02-01 (when full TAG is IPN-_HC-0222-01-B511) Variant: When unicity of the code is not possible, use the following option, IP to retrieve inspection plans for piping, OIL (as an example) to group per fluids, increment with 4 or 3 (if any prefix) digits: 0001, 0002, etc. Example, IP-OIL-0001	Equipment TAG Remark: It may be necessary to prefix with the reference of the platform to have unicity of the code
Maintenance Plan description (40 alphanumeric characters)	Equipment TAG Remark: It may be necessary to have the reference of the platform in the description to get unicity	Full TAG of the piping group (as here below defined)	Equipment full TAG and maintenance type to be performed: Overhaul (removal, overhaul, re-installation or substitution), OR Replacement as new (consumable valve, not re-used) Remark: It may be necessary to have the reference of the platform in the description to get unicity
functional location: Scheduling TAG (40 alphanumeric characters)		The functional location is a Group of piping defined prior any FAME+ criticality assessment; the TAG naming convention is defined within the user manual "FAME+ implementation guidance" (page 32). Example of TAG, IPN-_HC-0222-01-B511, in which the first two digits "02" will identify the platform and so help to have unicity	
Maintenance item description (40 alphanumeric characters)	According to criticality assessment within FAME+, one of the here below items, Non-Intrusive Major Inspection (NI-MAJ), Non-Intrusive Intermediate Inspection (NI-INT), Intrusive Major Inspection (IN-MAJ)	According to the FAME+ criticality assessment; select one of the following scope of inspection, Non-Intrusive Major Inspection (NI-MAJ), exceptionally, Intrusive Major Inspection (IN-MAJ)	Only one scope of inspection within FAME+: installation or substitution), OR Replacement as new (consumable valve NOT re-used)
Task List Group (8 alphanumeric)	Equipment TAG	IPAAAx (unique for one fluid) where,	Equipment TAG (shorted)



Exploration & Production

General Specification

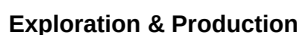
Date: 10/2009

GS EP EXP 221

Rev: 02

Appendix 2

Note: For African affiliates (single client) a first digit is used to identify the affiliate, such as A, C, G, or N (Nigeria)	TYPE OF EQUIPMENT		
	VESSELS	PIPING	PSVs
characters)	Remark: It may be necessary to prefix with the reference of the platform to have unicity of the code	IP means Group of Piping (for FAME+ assessment purpose), AAA: fluid as per GS EP EXP 501 (e.i. -HC, LPG, AIR, etc.), xxx: 001, 002, 003, etc. (depends on the Number of Piping groups)	Remark: It may be necessary to prefix with the reference of the platform to have unicity of the code
Task List Group (8 alphanumeric characters) - Variant	Variant: Where unicity is not possible due the lenght of the TAG, a variant with the code of the platform, type of equipment and sequential number is used. Main equipment types are coded: refer to Para 14.5. Example: APLV0001	Variant: When unicity is not possible, use the following option, I to identify task lists for piping, _HC or HC (example) to group per fluids, increment with 3 or 2 (if any prefix) digits: 001, 002..... Example: I-_HC001	Variant: Where unicity of the code is not possible due the lenght of the TAG, a variant with code of platform, type of equipment and sequential number is used. Main equipment types are coded: refer to Para 14.5.
TL Group counter (2 alphanumeric characters)	10, 20, 30, etc.	Nx ou Ix where, N: Non-Intrusive Major Inspection, I: Intrusive Major Inspection	10, 20, 30, etc.
TL Group Counter description (40 alphanumeric characters)	Inspection Route description	Inspection Route description	Inspection Route description
Operation description (40 alphanumeric characters)	main tasks (maintenance and inspection) to be done to perform the planned inspection activity	Main tasks (maintenance and inspection) to be done to perform the planned inspection activity	Main tasks (maintenance and inspection) to be done to perform the planned inspection activity
Inspection Route name (20 alphanumeric characters)	AAAAAAAAA/BBBBBB-XX (10 / 6-2), AAAAAAAAA: equipment TAG BBBBBB: NI-MAJ, or IN-MAJ, or NI-INT XX: 01, 02, 03, etc. Remark: It may be necessary to prefix with the reference of the platform to have unicity of the code	AAAAAAAAAAAAAAAA/BB-X (15 / 2-1) where, AAAAAAAAAAAAAAAA: equipment short TAG BB: NM (non-intrusive major), or IM (intrusive major) X: 1, 2, 3, etc.	AAAAAAAAAAAAAAAA/BBBBBB (14 / 6) where, AAAAAAAAAAAAAAAA: equipment TAG, BBBB: NI-MAJ Remark: NO route defined for consumable valves (a single measuring point) Remark: it may be necessary to prefix with the reference of the platform to have unicity of the code



General Specification

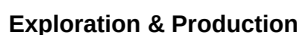
Date: 10/2009

GS EP EXP 221

Rev: 02

Appendix 2

Note: For African affiliates (single client) a first digit is used to identify the affiliate, such as A, C, G, or N (Nigeria)	TYPE OF EQUIPMENT		
	LIFTING equipment	CORROSION MONITORING	
Maintenance Plan code (12 alphanumeric characters)	1-Not fixed equipment NOT allocated to a given site (or platform): Site code/Sub-Class code 2- Fixed equipment allocated to a given site (or Platform): Sector code/Sub-Class code 3- Equipment individually managed: Sector code/Individual TAG for Cranes & Elevators Note: Sub-class codes as per Technical objects classification, e.g., LFTG-LOO, LFTG-LA, LFTG-LAR (with rope)	Sector code/Sub-Class code Note: Sub-class codes as per Technical objects classification: CORR-CC, CORR-PRB, CORR-BIO, CORR-SAND; COR-ANAL for sampling & analysis	
Maintenance Plan description (40 alphanumeric characters)	1-Not fixed equipment NOT allocated to a given site (or platform): Site designation/Sub-Class code/Sub-Class designation 2- Fixed equipment allocated to a given site (or Platform): Sector designation/Sub-Class code/Sub-Class designation	Sector designation/Sub-Class designation	



Date: 10/2009

Rev: 02

Appendix 2

Note: For African affiliates (single client) a first digit is used to identify the affiliate, such as A, C, G, or N (Nigeria)

TYPE OF EQUIPMENT

LIFTING equipment

CORROSION MONITORING

3- Equipment individually managed:

Sector designation/Sub-Class/Individual TAG for Cranes & Elevators

Note 1: Sub-class codes as per Technical objects classification (e.g., LFTG-LOO)

Note 2: Sub-class designation will define where rope fitted (e.g., GEN LFTG APPLIANCE WITH ROPE)

functional location: Scheduling
TAG (40 alphanumeric
characters)

Create a Scheduling TAG per sector (platform) for each Sub-Class

Maintenance item description
(40 alphanumeric characters)

Scope of inspection including frequency in month

**Scope of inspection
including frequency in
month**

Task List Group (8 alphanumeric characters)

1-Not fixed equipment NOT allocated to a given site (or platform):

**Site designation/Sub-Class
code shorted**

2- Fixed equipment allocated to a given site (or Platform):

Sector designation/Sub-Class code shorted

3- Equipment individually managed:

Sector designation/Sub-Class/Individual TAG for Cranes & Elevators

Note: sub-class code shorted as below,

LFTG-LA = GLA

LFTG-LA with rope = GLAR

LFTG-FIX = GLF

LFTG-LOO = GLG

LFTG-WR = ROP

$$\text{LFTG-FL} = \text{FLG}$$
$$\text{LFTG-TR} = \text{TRA}$$
Sector code/Sub-Class code
shorted

Note: Sub-class codes shorted are.

$$\text{CORR-CC} = \text{CORC}$$

CORR-PR = CORP

CORR-BIO = CORB

CORR-SAND= CORS

COR-ANAL = CORA



Note: For African affiliates (single client) a first digit is used to identify the affiliate, such as A, C, G, or N (Nigeria)	TYPE OF EQUIPMENT		
	LIFTING equipment	CORROSION MONITORING	
Task List Group (8 alphanumeric characters) - Variant			
TL Group counter (2 alphanumeric characters)	10, 20, 30, etc.	10, 20, 30 etc.	
TL Group Counter description (40 alphanumeric characters)	Sub-Class code shorted-Scope of inspection including frequency (Inspection technique code) Note 1: sub-class code shorted as below, LFTG-LA = GLA LFTG-LA with rope = GLAR LFTG-FIX = GLF LFTG-LOO = GLG LFTG-WR = ROP LFTG-FL = FLG LFTG-TR = TRA Note 2: inspection techniques are, V = General visual NDE = Non destructive testing FT = Function test DT = Destructive testing AN = Analysis LT = Load test	Sector designation Platform designation/Sub-Class designation	
Operation description (40 alphanumeric characters)	Scope of inspection including frequency (Inspection technique code)	Scope of intervention As per Sub-class recommended descriptions are , Corrosion coupons : Retrieval, Visual, Weighing, Reinstall Corrosion probes : Measurement, Analysis Bio probes: Measurement, Analysis Erosion probes : Measurement, Analysis Laboratory analysis : Sampling, Analysis	
Inspection Route name (20 alphanumeric characters)	1-Not fixed equipment NOT allocated to a given site (or platform): Site code/Sub-Class code/Inspection frequency in month 2- Fixed equipment allocated to a given site (or Platform): Sector code/Sub-Class code/Inspection frequency	Sector code/Sub-Class code-Sequence number	



Note: For African affiliates (single client) a first digit is used to identify the affiliate, such as A, C, G, or N (Nigeria)	TYPE OF EQUIPMENT		
	LIFTING equipment	CORROSION MONITORING	
	in month 3- Equipment individually managed: Sector code/Individual TAG for Cranes & Elevators/Inspection frequency in month Note: Sub-class codes as per Technical objects classification, e.g., LFTG-LOO, LFTG-LA, LFTG-LA-WR (with rope)	Note: Sub-class codes as per Technical objects classification: CORR-CC, CORR-PRB, CORR-BIO, CORR-SAND; COR-ANAL for sampling & analysis	
Inspection Route description (40 alphanumeric characters)	1-Not fixed equipment NOT allocated to a given site (or platform): Site code/Sub-Class code/Sub-class description-Inspection frequency in month 2- Fixed equipment allocated to a given site (or Platform): Sector code/Sub-Class code/Sub-class description-Inspection frequency in month 3- Equipment individually managed: Sector code/Individual TAG for Cranes & Elevators/TAG description-Inspection frequency in month Note: where rope fitted Sub-class designation must include (e.g., GEN LFTG APPLIANCE WROPE)	Sector designation/Sub-Class designation-Sequential number	



Exploration & Production

General Specification

Date: 10/2009

GS EP EXP 221

Rev: 02

Appendix 2

PIPING SYSTEMS, example for African affiliate	Non-Intrusive Major Inspection (NM)	Non-Intrusive Intermediate Inspection	Intrusive Major Inspection (IM)
Maintenance Plan code	AI_HC-02-01	N/A	AI_HC-02-01
Maintenance Plan description	Inspection-IPN_HC-0222- 01-B511	N/A	Inspection-IPN_HC-0222- 01-B511
Functional location (Scheduling TAG)	PAL/PALP1/OIL/SEP /IPN- _HC-0222-01-B511	N/A	PAL/PALP1/OIL/SEP /IPN_HC-0222-01-B511
Maintenance item description	Non-Intrusive Major Inspection	N/A	Intrusive Major Inspection
Task List Group	AI-HC001	N/A	AI-HC001
TL Group Counter	10	N/A	20
TL GC description	PALP1-IPN_HC-0222-01- B511/NM-1	N/A	PALP1-IPN_HC-0222-01- B511/IM-1
Operation description	External inspection + NDT	N/A	Internal & external inspection + NDT
Inspection Route name	IPN_HC-0222-01/NM-1	N/A	IPN_HC-0222-01/IM-1
Inspection Route description	IPN_HC-0222-01- B511/NM-1	N/A	IPN_HC-0222-01- B511/IM-1

PRESSURE VESSELS, example for african affiliate	Non-Intrusive Major Inspection (NI-MAJ)	Non-Intrusive Intermediate Inspection (NI-INT)	Intrusive Major Inspection (IN-MAJ)
Maintenance Plan code	APALP1/CA601	APALP1/CA601	APALP1/CA601
Maintenance Plan description	Inspection-PALP1/CA601	Inspection-PALP1/CA601	Inspection-PALP1/CA601
Functional location (Scheduling TAG)	PAL/PALP1/WAT/WFLT /CA601	PAL/PALP1/WAT/WFLT /CA601	PAL/PALP1/WAT/WFLT /CA601
Maintenance item description	Non-Intrusive Major Inspection	Non-Intrusive Intermediate Inspection	Intrusive Major Inspection
Task List Group	APLCA601	APLCA601	APLCA601
TL Group Counter	10	20	30
TL GC description	PALP1/CA601-Non intrusive major inspec.	PALP1/CA601-Non intrusive intermediate	PALP1/CA601-Intrusive major inspection
Operation description	External inspection + NDT	Non destructive testing	Internal & external inspection + NDT
Inspection Route name	APAP1CA601/NI-MAJ-01	APAP1CA601/NI-INT-01	APAP1CA601/IN-MAJ-01
Inspection Route description	PALP1/CA601-NI MAJ-01	PALP1/CA601-NI INT-01	



Exploration & Production

General Specification

Date: 10/2009

GS EP EXP 221

Rev: 02

Appendix 2

PSV's Overhauled/recalibrated	Non-Intrusive Major Inspection (NI-MAJ)	Non-Intrusive Intermediate Inspection (NI-INT)	Intrusive Major Inspection (IN-MAJ)
Maintenance Plan code	N/A	N/A	AG/PSV-7533A
Maintenance Plan description	N/A	N/A	GIR/41-PSV-7533A-Overhaul
functional location (Scheduling TAG)	N/A	N/A	GIR/FPSOT/WAT/WINJ /41-PSV7533A
Maintenance item description	N/A	N/A	Overhaul
Task List Group	N/A	N/A	AGS7533A
TL Group Counter	N/A	N/A	10
TL GC description	N/A	N/A	GIR/41-PSV-7533A-Overhaul
Operation description	N/A	N/A	Pre-Pop test, overhaul & recalibration
Inspection Route name	N/A	N/A	AGIR-PSV7533A/IN-MAJ
Inspection Route description	N/A	N/A	GIR/41-PSV-7533A-Overhaul

Consumables PSV's (not re-used)	Non-Intrusive Major Inspection (NI-MAJ)	Non-Intrusive Intermediate Inspection (NI-INT)	Intrusive Major Inspection (IN-MAJ)
Maintenance Plan code	N/A	N/A	AG/TSV-1011
Maintenance Plan description	N/A	N/A	GIR/41-TSV-1011-Replacement as new
Functional location (Scheduling TAG)	N/A	N/A	GIR/FPSOT/EXT/EWELL/T SV-1011
Maintenance item description	N/A	N/A	Replacement as new
Task List Group	N/A	N/A	AGTS1011
TL Group Counter	N/A	N/A	10
TL GC description	N/A	N/A	GIR/41-TSV-101-Replacement as new
Operation description	N/A	N/A	Removal and replacement as new
Inspection Route name	N/A	N/A	N/A
Inspection Route description	N/A	N/A	N/A



Exploration & Production

General Specification

Date: 10/2009

GS EP EXP 221

Rev: 02

Appendix 2

LIFTING equipment, example for Nigerian affiliate (N)	1-Not fixed equipment NOT allocated to a given site (or platform	2- Fixed equipment allocated to a given site (or Platform	3- Equipment individually managed
Maintenance Plan code	NAM/LFTG-LA Where rope fitted: NAM/LFTG-LAR	N46/LFTG-FIX	N46/46-JD961
Maintenance Plan description	AMK/LFTG-LA/GENERAL LIFTING APPLIANCES	AMK/LFTG-LA/GEN LFTG APPLIANCE WITH ROPE	AMP2/LFTG-CR/46-JD- 961
Functional location (Scheduling TAG)			
Maintenance item description	12 MONTHLY INSPECTION	12 MONTHLY INSPECTION	5 YEARLY INSPECTION
Task List Group	N46/GLA Where rope fitted: N46/GLAR	N46/GLF	N46JD961
TL Group Counter	10	10	30
TL GC description	GLA-12 MONTHLY INSPECTION (V-FT) Where rope fitted: GLAR-6 MONTHLY ROPE INSPECTION (V-NDE)	GLF-12 MONTHLY INSPECTION (V)	PEDCRANE- 5 YEARLY INSP (V-NDE-DT-AN-LT)
Operation description	12 MONTHLY INSPECTION (V-FT) Where rope fitted: 6 MONTHLY ROPE INSPECTION (V-NDE)	12 MONTHLY INSPECTION (V)	5 YEARLY INSPEC (V- NDE-DT-LT)
Inspection Route name	NAMK/LFTG-LA/12MONTH Where rope fitted : NAMK/LFTG-LA-WR/6MON	NAMP2/LFTG-FIX/12MON	NAMP2/46JD961/60MON
Inspection Route description	AMK/LFTG-LA/GEN LFTG APPLIANCE WROPE-12M Where rope fitted : AMK/LFTG-LA/GEN LFTG APPLIANCE WROPE-6MO	AMP2/LFTG-FIX/GEN LIFTING FIXTURE-12M	AMP2/46-JD-961- PEDESTAL CRANE-5 YEARLY



Exploration & Production

General Specification

Date: 10/2009

GS EP EXP 221

Rev: 02

Appendix 2

CORROSION MONITORING	Corrosion coupon	Corrosion probe	
Maintenance Plan code	N46/CORR-CC	N46/CORR-PRB	
Maintenance Plan description	AMP2/Corrosion coupons survey	AMP2/Corrosion probes survey	
Functional location (Scheduling TAG)	AMK/AMP2/COF/CORR /CORROSION COUPONS	AMK/AMP2/COF/CORR /CORROSION PROBES	
Maintenance item description	Monthly Survey	6 Monthly Survey	
Task List Group	N46/CORC	N46/CORP	
TL Group Counter	10	10	
TL GC description	AMP2/Corrosion coupons Survey	AMP2/Corrosion probes Survey	
Operation description	Retrieval, Visual, Weighing, Reinstall	Measurement, Analysis	
Inspection Route name	N46/CORR-CC-01	N46/CORR-PRB-01	
Inspection Route description	AMP2/CORR-CC-01	AMP2/CORR-PRB-01	



Appendix 3 List of Templates

Template	File name	Description
FL	10-PM_Template_Functional_Locations (Vx.y).xls	Functional Locations & Equipment
EQ	11-PM_Template_Equipment (Vx.y).xls	Equipment
BOM	20-PM_Template_BOM (Vx.y).xls	Bill of Material (BOM)
BOMAss	21-PM_Template_BOM Assignment (Vx.y).xls	BOM Assignment
TOClass	32-PM_Template_TO Classification (Vx.y).xls	Technical Objects Classification
FLClass	30-PM_Template_FL Classification (Vx.y).xls	Functional Locations Classification
EQClass	31-PM_Template_EQ Classification (Vx.y).xls	Equipment Classification
DOC	35-PM_Template_Documents (Vx.y).xls	Documents
OBJLK	38-PM_Template_Objects_Links (Vx.y).xls	Objects Links
MPOINT	40-PM_Template_Measuring_Points (Vx.y).xls	Measuring Points
MPClass	41-PM_Template_MP_Classification (Vx.y).xls	Measuring Points Classification
MDOC	42-PM_Template_Measurement_Documents (Vx.y).xls	Measurement Documents
IROUTE	43-PM_Template_Inspection_Routes (Vx.y).xls	Inspection Routes
COUNT	45-PM_Template_Counters (Vx.y).xls	Counters
INSP_MP	90-INSP_Template_Measuring_Points_&_Routes (Vx.y).xls	Inspection Measuring Points
STEXT	50-PM_Template_Standard_Texts (Vx.y).xls	Standard Texts
TASKL	51-PM_Template_Task_Lists (Vx.y).xls	General Tasks Lists
MPLAN	52-PM_Template_Maintenance_Plans (Vx.y).xls	Maintenance Plans