






Plant 1.0 MTPA ALUMINA REFINERY STREAM-5	Client NALCO	Contract Code NAL	Document ID 6695-PDM-G00-BD-0002	Contract No. 66-6695
 thyssenkrupp	Vendor's Documentation			 NALCO नेशनल एल्युमिनियम कंपनी लिमिटेड National Aluminium Company Ltd.
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<p>tkIS India / Vendor</p> <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Category Codes (Submission Purpose)</div> <div> <input type="checkbox"/> 1 For Approval <input type="checkbox"/> 2 For Review / Comments <input type="checkbox"/> 3 For Information <input type="checkbox"/> 4 For Engineering <input type="checkbox"/> 5 For Enquiry <input type="checkbox"/> 6 For Order Placement <input type="checkbox"/> 7 Final & Approved <input type="checkbox"/> 8 Released for Construction </div> </div> <hr/> <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Acceptance Codes (Approval Codes)</div> <div> <input type="checkbox"/> 1 Approved <input type="checkbox"/> 2 Approved for Manufacturing / Fabrication with Comments as marked <input type="checkbox"/> 3 Not Approved / Resubmit <input type="checkbox"/> 4 Retained for Information / Records <input type="checkbox"/> 5 Reviewed <input type="checkbox"/> 6 Reviewed as Noted / Resubmit </div> </div> <p>Remarks for AC2 : This marked-up drawings is hereby approved for fabrication / manufacturing and shall be re-submitted after revision. This drawing should be revised only to the extent of tkIS India / Owner / Client comments. Any other changes made by you will not be considered unless clearly highlighted in covering letter asking for approval.</p> <p>This approval / review does not absolve the supplier from the full responsibility for design and fabrication.</p> <p>Date : ___/___/___ Name : _____</p>	<p>tkIS India / Owner / Client</p> <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Category Codes (Submission Purpose)</div> <div> <input type="checkbox"/> 1 For Approval <input type="checkbox"/> 2 For Review / Comments <input type="checkbox"/> 3 For Information <input type="checkbox"/> 4 For Engineering <input type="checkbox"/> 5 For Enquiry <input type="checkbox"/> 6 For Order Placement <input type="checkbox"/> 7 Final & Approved <input type="checkbox"/> 8 Released for Construction </div> </div> <hr/> <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Acceptance Codes (Approval Codes)</div> <div> <input type="checkbox"/> 1 Approved <input type="checkbox"/> 2 Approved for Manufacturing / Fabrication with Comments as marked <input type="checkbox"/> 3 Not Approved / Resubmit <input type="checkbox"/> 4 Retained for Information / Records <input type="checkbox"/> 5 Reviewed <input type="checkbox"/> 6 Reviewed as Noted / Resubmit </div> </div> <p>Date : ___/___/___ Name : _____</p>
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Rev.	Status	Description	Date	Prepared	Date	Checked	Date	Approved	AC
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Attachments and forms:

Attachment 01: Contract specific requirements

Attachment 02: Number of copies

Attachment 03: Instructions for Vendors for submission of drawings / documents electronically to EPCM Consultant

Attachment 04: Structure of documentation binders

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1. Scope

This procedure shall apply to the EPC/LSTK Contractors and Vendors (including project partners) contractually obliged to supply project material and associated drawings and project related services, documents including complete set of final documentation for their scope of supply / work for the following contract.

EPCM Consultant Project Code : NALCO-ALUMINA REFINERY PROJECT

EPCM Consultant Contract No.: 66-6695

These requirements shall be practiced for components with equipment number (Equipment Tag), material with item number, components with TAG number (electrical / instrumentation material) and completely engineered systems and equipment packages (package units).

These requirements shall not apply to piping components with an item number requiring quality certificates below 3.1 acc. to. EN 10204 and to individually ordered bolts and nuts.

2. Aim / purpose



This procedure shall provide instructions for preparation, handling of EPC/LSTK contractor's and Vendor's document, drawings and compiled sets of documentation to facilitate handover of documentation to customer.

This procedure shall guide EPC/LSTK contractor / vendor to follow uniform concepts in addition to the purchase order documents, the "Discipline-Specific Requirements, and technical information requirement indicated in the Technical Specifications / Datasheets.

Purchase order execution shall not be deemed to be complete until after all requirements for the documentation are satisfied.

3. Abbreviations and Definitions

Client	Means recipient of a product, e.g. plant or services NALCO
EPCM Consultant	thyssenkrupp Industrial Solutions (India) Private Limited and other offices of EPCM Contractor responsible for execution of the project wherever applicable
Vendor / Contractor	EPC/LSTK Contractor or Vendor shall mean the bidder during the bidding phase and the supplier / contractor after purchase order award. The Vendor supplies the equipment and/or services as specified by EPCM Contractor.
Construction Documentation (CD)	The Construction Documentation shall mean latest revisions of vendor's documents required for construction, erection and on-site preservation of equipment / machinery.
Final Vendor Documentation (FD)	The Final Vendor Documentation shall mean latest revisions of vendor's all technical documents (including As-Built - i.e. as fabricated at vendor's works), spare parts lists, list of special tools and other manufacturer instructions / procedures (QA / testing plans / procedures and storage, installation, maintenance, operation instructions etc.).
Manufacturer's Data Report (MDR)	The MDR comprises the quality assurance documentation consisting material test certificates, inspection records / reports, as well as all other reports and certificates as indicated in Order Specification in accordance with sections 8.2 of this document.
Doc-ID Code / Doc-ID Number	EPCM Contractor document identification number
Document	Individual document (or Drawing) as described in purchase order, order specifications / data sheets or any other contractual document etc.

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Documentation

Documents compiled in files as per the sequence / guidelines given and issued for specific purpose (i.e. "for Construction")

TAG

Equipment designation identified as per the numbering system of NALCO

4. Procedure: Preparation of Documents

4.1 General

Documents shall follow the industry practice for preparation of technical drawings and documents based on relevant standards.

As a rule, a separate document shall be prepared for each itemised Equipment TAG. The presentation of several equipment items with different item numbers in a single document shall not be allowed. Exceptions from this rule are flow diagrams, common arrangement drawings etc. as well as standby machines if these are identical with the main machine (same type, construction, material, dimensions, weight, accessories, connections etc.). For this, conformation is to be obtained from the person In-Charge (i.e. Lead Engineer) before preparation of the drawing / document.

If one TAG and/or Item number includes more than one drawing, these additional drawing numbers / document identification numbers shall be listed on the general arrangement drawing. Each of these additional drawings shall contain cross-references to the general arrangement drawing.

All information submitted through Drawings / Documents shall be explicit, rule out misinterpretations and relate to the specific application or operating conditions of the equipment supplied. The number of documents shall be kept to a minimum, i.e. as much information as possible should be incorporated in one document. Exceptionally long documents shall be split into logical parts / sections.

4.2 Document identification and attributes

For the unique identification of a document all documents shall be unambiguously marked by the following information at least.

- EPCM Consultant's Contract number,
- EPCM Consultant's Doc-ID code wherever applicable,
- Revision No.

In addition to the above mentioned information for the document identification all documents shall bear



- the document title,
- the vendor Name,
- the purchase order number,
- the applicable TAG / Item / Part Number and its description,
- the revision date,

4.3 Document layout

The drawings / documents shall be prepared using EPCM Consultant supplied templates. Vendors shall adopt the native files of the drawing / document templates to the Engineering tool being used for execution. Vendors can use their own title block in addition to the EPCM Consultant provided title block. However to avoid any inconsistency, revision index must be single (Common).

The information for the documents identification and the corresponding attributes as listed in chapter 4.24.2 shall be mentioned at the specified location in the drawing title-block or on the cover page of the document.

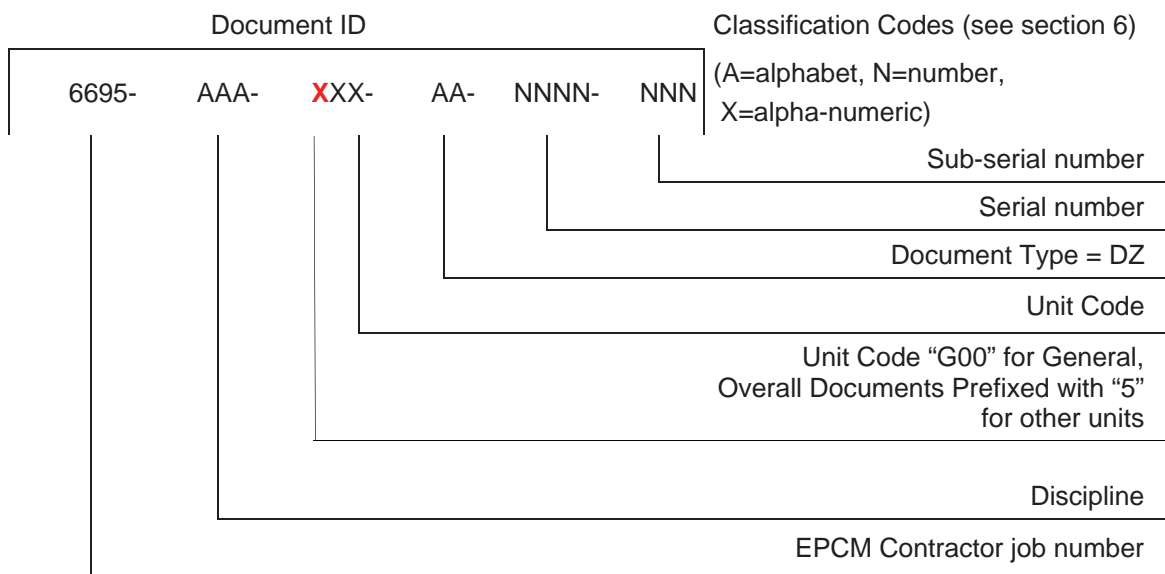
Alternatively the information listed in chapter 4.2 shall be incorporated with contract-specific mark-up on the first page of the standard document / manual / brochures or typical drawings clearly indicating the exact applicable type / model and/or relevant dimensions.

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4.4 Doc-ID code (EPCM consultant document identification number)

All documents to be submitted shall be marked by a defined Doc-ID code pre-determined and given by EPCM consultant. The structure of the Doc-ID shall be as given below;

Document ID for vendor's documents with unit definition



The vendor shall submit the "Master Document Index" (list of deliverables) for all engineering documents and each of the ordered tag / item to EPCM Consultant as per format attached as attachment-A0, immediately after issue of LOI / Purchase Order. EPCM consultant shall review this list and inform vendor the vendor document series for each document indicating the EPCM consultant Doc-IDs for the documents listed in Master Document Index. For any new / additional documents vendor shall allocate subsequent incremental sub-serial numbers and update the Master Document Index. Vendor shall indicate the EPCM consultant Doc-ID on all drawings / documents submitted to EPCM consultant. EPCM consultant may reject the drawings / documents submission if the formal aspects are not fulfilled according to this instruction. This Master Document Index shall be submitted by vendor to EPCM consultant along with the monthly status reports.

4.5 Revision index

The revision index shall also be indicated on each document. The level of progress shall be indicated unambiguously by the revision index on the title block.

The first issue of a document shall also indicate the revision index appropriately.

The content of the modification/purpose shall be briefly stated in the revision column. For example the following descriptions shall be used:

Rev. 00 First issue

Rev. 01 EPCM consultant's comments / remarks incorporated



Rev. 02 Issued for Fabrication / Construction

The terms "last revision" or "total revision" shall not be used.

Each document modification and distribution, whether internal for vendor or for external distribution to EPCM consultant, shall increase the revision index by one counter.

All revisions of the Vendor documents shall have passed the Vendor's internal review and approval procedure. The date of review and approval shall be indicated on the document. With this vendor confirms that the documents have been checked for conformance with the requirements of the purchase order documents.

Each revised drawing / document shall be prepared, checked, approved and distributed like the first issue of the document. Each document revision shall be submitted to EPCM consultant only once. While re-submission of the revised documents all triangles and clouds relating to the previous revision shall be removed. In the case of revision, the complete document affected by the revision shall be resubmitted as

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one pdf document. The submission of part document with specific revised content individually shall not be allowed.

All modifications, contained in the latest revision as compared to the previous one, shall be clearly marked in the document. (The revision index shall be indicated in a triangle following the modification.) Modified parts of a drawing shall be marked by enclosing them in “clouds” with revision index triangle. Any intermediate revisions not submitted to EPCM consultant shall also be submitted for information along with the latest revision. This is to enable EPCM consultant to track changes happened during intermediate revisions. However review of the revised documents shall be limited to the marked revisions and EPCM consultant shall provide approval/comments/receipt-confirmation only on the last revision submitted.

As-Built documents shall not show any revision triangles and clouds and shall be indicated as “As-Built” in the revision index. As-Built Drawings / documents shall be submitted as part of Final Documentation.

4.6 Contractual language

All documents to be submitted shall be prepared in English language.

4.7 Document formats

The sheet sizes of drawings and documents shall correspond to ISO standards generally followed as per the industry practice. The contractual sheet sizes are listed in **Attachment 01 “Contract-specific requirements”**.

Text documents shall generally be prepared in the A4 format. Documents, consisting of several pages shall exclusively include the A4 and/or A3 formats with cover page). Page number and total number of pages shall generally be shown on each page of vendor's documents. As general rule, information on the back side of the document shall not be allowed. Exceptions shall be limited only for standard printed product catalogues, printed manuals or large calculations or voluminous data from a software tool.

All documents greater than A4 shall be folded to A4 so that the title block shall be visible on top. The location of the title block is given in the templates.

All documents, except the reduced sizes of documents which are implemented in the operation and maintenance instruction, have to be delivered in the original size.

By using colours in documents the substance of information shall not be lost in black and white copies.

4.8 Document quality

Copies of drawings and documents shall be made on white paper on good quality commercially available paper of having minimum thickness of at-least 70g/m2 (gsm).

All documents shall have a 2 cm free margin and 4-hole punching. The 4-hole-punched paper of documents greater than A3 shall either be fitted with hole reinforcements or adhesive reinforcing strips.

5. Procedure: Handling of documents and documentation binders



5.1 Submission of documents and documentation binders

The number and scope of the documents and documentation binders to be submitted shall be as specified in the “Summary of Engineering Documents” / “Document Request Form” attached to the technical specification of the purchase order. The minimum number of documentation is indicated in Attachment 02 “Number of copies”. Each TON of a purchase order requires an independent documentation (per TON at least one binder), exceptions to be advised during Engineering Phase by EPCM consultant.

The vendor shall submit the documents and documentation binders to EPCM Contractor at the dates indicated in the said annexure “Summary of Engineering Documents” / “Document Request Form” to ensure further engineering and proper review and/or forwarding.

Documents and documentation binders shall be submitted with an accompanying letter (transmittal), which shall contain:

- EPCM consultant Contract number, Transmittal-ID
- EPCM consultant Doc-ID Code, Revision No., Document title of the attached documents / documentation binders
- The purpose of transmission (“for information/action”, “for review”, “for approval”),
- and in the case of the submission of documentation binders the purpose of the binders, e.g. “for construction” or “final documentation” etc.

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5.2 Guidelines for documentation binders

In order to ensure a uniform appearance of the documentation binders, the vendor shall use binders as specified in **Attachment A01 "Contract-specific requirements"**. The binders shall only be filled to a maximum level of 90 % to leave space for revisions or amendments.

For the delivery of the documentation binders, the binders shall be placed into parcels in suitable position and sent via courier service to the delivery address of the documentation as indicated in **Attachment 01 "Contract-specific requirements"**.

The vendor shall submit the first edition of the documentation binders (one set draft or master file) of the construction/final documentation binders including index to EPCM consultant for approval through transmittal listing the Table of Contents.

After the review of the construction/final documentation binders EPCM consultant shall provide approval/review comments, the Table of Contents and the spine labels for each approved/commented binders back to the vendor also through transmittal listing the Table of Contents.

Only after EPCM consultant approval the required number of binders shall be submitted by vendor in line with the Table of Contents (documentation grouping and sequence) and considering EPCM consultant approval/review comments. Direct submission of final copies without approval from EPCM consultant will not be accepted and the vendor will have to submit all required number of binders again after incorporating the changes given by EPCM consultant.

5.3 Guidelines for expediting documents

Expediting documents shall be submitted as specified and must be clearly identified. Material delivery schedules, fabrication and construction time schedules shall be submitted not later than on the date of the first drawing submittal for review. Updated versions shall thereafter be submitted monthly without specific request by EPCM consultant. The expediting document shall show all schedule-critical materials and the critical path, regardless of whether they have been ordered or not. Moreover, the material delivery schedules of subcontractors or manufacturers of key equipment shall be shown. The expediting documents shall show the scheduled completion dates as indicated in the original time schedule and the actual status together with the updated time schedule. Expediting documents are for EPCM consultant information only.

5.4 Guidelines for generation of electronic files

In case documents are exchanged via e-mail or a collaboration tool, vendor shall submit only soft copies in PDF file format to EPCM consultn. Vendor shall ensure that PDF files shall not be encrypted or password protected to allow access, modification and management.

Native Files shall be submitted only along with Final / As-Built Documentation if required. Native files submission during the engineering phase for approval if any shall be as per the specific instructions of the technical responsible Lead Engineer.

Separate pdf files shall be submitted for each individual documents identified with one Doc-ID Code. Multiple drawings / documents with several Doc-IDs merged to one single pdf file shall not be accepted. All drawings / documents greater than A3 shall have individual single page pdf files with individual Doc-IDs. A4 and A3 size documents can be multi-page pdf files.

The orientation of pdf files shall be in reading orientation for all sizes irrespective of the size of document and number of pages.

Name of the pdf file shall be:



Doc-ID Code_000_Rev.pdf

For Example: 6695-EQS-09-DZ-0003-005_000_04.pdf

Following restrictions shall be taken into account naming of pdf files for electronic transfers.

- Length of file name must not exceed 128 characters. The whole length of path name and file name together must not exceed 200 characters.
- Blanks are not allowed (use underscore "_" instead of blank to separate parts of the file name)
- Special characters (e.g. / , \ , : , * , ? , " , < , > , !) and umlauts are not allowed

5.5 Electronic submission

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In case that documents are exchanged electronically in pdf format through e-mail or a collaboration tool. , the details regarding the handling of the collaboration tool are described in a contract-specific annexure as listed in **Attachment 01 "Contract-specific requirements"**.

Transmittal as well as drawings / documents shall be submitted electronically. Whenever collaboration tool does not generate automatic intimations to the recipients e-mail intimation shall be sent by the originator to recipient. E-mail transfer of individual documents without transmittal / reference details is not allowed.

Date of receipt of document will be considered only when EPCM consultant can open and view the documents and transmittal properly. If EPCM consultant can't open or view the documents submission, it will be treated as invalid / void / rejected.

All files submitted on CD / DVD or other data carrier as part of Final / As-Built Documentation must be accompanied by a table of contents and a structure description for native files if applicable. (Description of layer allocation, pin allocation, list of fonts applied). The files shall be named according the file naming convention explained in this procedure (refer to chapter 6.4).

6. Approvals by EPCM consultant

EPCM consultant shall review the documents to be submitted by vendor with respect to the requirements specified in the purchase order / technical specifications. EPCM consultant will provide review comments and return the document with acceptance code. The acceptance code will be clearly marked on the in-built CC-AC Code Block or Electronic stamp on the drawings / document. (In case of Physical documents the documents will be Rubber Stamped, clearly indicating the Acceptance Code).

EPCM consultant shall check/comment the documents within a period of ten (10) working days after receipt. Vendor shall consider this review period in his manufacturing schedule.

Once the commented Documents are received by vendor, Vendor will submit the revised Drawings/ Documents with next revision within a period of ten (10) working days.

6.1 Category Codes

Category Codes are the codes followed to indicate the Document Submission Requirements or the Document Status. Following are the Category Codes;

- 1 for Approval
- 2 for Review / Comments
- 3 for Information
- 4 for Engineering
- 5 for Enquiry
- 6 for Order Placement
- 7 Final & Approved
- 8 Released for Construction

6.2 Acceptance Codes

Acceptance Codes are the codes followed to indicate the Document Approval Status confirmed by the Approving Authority. Following are the Acceptance Codes;



- 1 Approved
- 2 Approved for Manufacturing / Fabrication with comments as marked
- 3 Not Approved / Resubmit
- 4 Retained for Information / Records
- 5 Reviewed
- 6 Reviewed as noted

Note: The Category Codes and Acceptance Codes will be abbreviated in the footer of the Transmittal.

6.3 General

Approval or review of the vendor's drawings and documents, shall not relief the vendor of his responsibility for the correctness of drawings and documents.

If the vendor starts the fabrication without approved drawings/documents by EPCM consultant he has the full responsibility without releasing him from any obligations e.g. modification or repetition of the work in a later stage after receiving the approval of EPCM consultant. Cost related to consequences due to the start of fabrication without approved documents/drawings shall be borne by the vendor.

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If within the period agreed no remark / approval shall be received by the vendor, he shall contact EPCM consultant accordingly in written form.

6.4 Documentation binders as part of final inspection

Final documentation binders are part of successful final inspection by EPCM consultant.

A waiver of inspection with regard to equipment does not include a waiver of inspection of the related documentation.

No purchase order shall be considered completed until data and documents/documentation required by the purchase order have been received by EPCM consultant / client.

7. Structure of documentation binders



The documentation binders shall be structured in sections A, B and C as described in the following table (CON = Construction Documentation / FIN = Final Documentation, also refer to **Attachment A04 "Structure of the vendor's documentation"**.)

Section A, Design documents

Group No.	Examples for the documents which are part of the defined group no.	Part of Documentation	
01	Block diagrams, flow diagrams, piping and instrumentation diagrams (PIDs), process flow diagrams (PFDs), overview diagrams (as applicable)	CD	FD
02	Foundation data, fixing plate details, anchoring data, mounting details (as applicable)	CD	FD
03	Overall arrangement diagrams, general arrangement drawings, overall layout, plot plan etc. (as applicable)	CD	FD
04	Detailed drawings, part lists, detailed assembly drawings, sectional views, calculations (as applicable)	CD	FD
05	Fabrication instructions / procedures, welding instructions, heat treatment instructions and other fabrication instructions (as applicable)	CD	FD
06	Packing / transportation, storage and preservation instructions (as applicable)	CD	FD
07	Electrical and instrumentation documents, switching and control diagrams, interlocking diagrams, wiring / circuit and terminal diagram, hook-ups (as applicable)	CD	FD
08	Special documents / product catalogues, catalogues of installed single components, hydraulic diagrams (as applicable)	CD	FD

Section B, Operating and maintenance instructions

Group No.	Current Group Description	Part of Documentation	
09	Installation and erection instructions, sequence of assembly and erection, installation drawings	CD	FD
10	Operating and maintenance instructions or user manuals incl. recommended spare parts and lubricants	-	FD
12	Spare Parts List (unpriced)	-	FD
13	List of Lubricants / Feedstocks	-	FD

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Section C, Fabrication verification and inspection documents

Group No.	Current Group Description	Part of Documentation	
11	Test certificates and inspection reports, fabrication and inspection documents manufacturer's declaration, declaration of conformity, evidence of origin, test reports and material test certificates, EPCM consultant non-conformance report	-	FD

7.1 Documentation structure for package units and heavy machinery

Package units are understood to mean independent and operative plant sections consisting of several components. As a rule, the PU are designed, manufactured, erected and commissioned as complete units by the manufacturer.

If advised by the responsible lead engineer, documentation structure for these units shall be as follows:




- 1.) All general documents of a package unit (e.g. PIDs of the unit, user instructions of the unit, instrumentation, bulk material, equipment without TAG number, etc.) shall be sorted according to the following sections:
 - **Section A, Design documents**
 - **Section B, Operating and maintenance instructions**
 - **Section C, Fabrication verification and inspection documents**
- 2.) The documentation for the individual equipment items within the package unit shall be sorted accordingly as substructure within the package unit documentation or as advised by the responsible Lead Engineer.

7.2 Test Certificates and inspection reports submitted as part of section C

Fabrication verification and inspection documents shall be submitted with a cover sheet and a table of contents including page numbers for a completeness check.




Examples for inspection documents applicable according to Code of Process Vessels and Heat Exchangers belonging to one TAG are given below:

- Inspection release note
- Approved QAP / approved-signed test procedures
- Weld plan and WPS/PQR
- Factory acceptance test reports / certificates
- Manufacturer's test certificate, guarantee certificate, certificate of compliance and performance test reports, declaration of conformity etc.
- Statutory / authority approval documents / third party approval records
- Material certificates & material heat charts
- Material traceability lists
- Inspection reports
- Dimensional check records
- UT-test reports
- MP-test reports
- PT-test reports
- X-ray-test reports
- Hydrostatic test reports
- Air test reports
- Record of production test plates

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- Records of tube to tubesheet examination
- NDT drawings / logs
- Welds map indicating welders qualification
- Heat treatment diagrams
- Results of corrosion tests
- Evidence of origin
- EPCM Contractor non-conformance report
- EPCM Contractor quality certificate

Files containing documents with original notified body-sign / stamps shall be marked "Original" and to be hand-delivered to EPCM consultant's project manager / inspection lead-engineer.

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Attachment 01: Contract Specific Requirements

Shipping address

of documentation according to protocol of negotiations for placement of purchase order:

thyssenkrupp Industrial Solutions (India) Private Limited (EPCM consultant)	thyssenkrupp Industrial Solutions (India) Private Limited Attn. Mr. Waibhav Raut Uhde House, L.B. Shastri Marg, Mumbai - 400083 India.
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Admissible sheet sizes:

A0 landscape format / separate Doc-ID required per sheet (Exceptional case only)
 A1 landscape format / separate Doc-ID required per sheet
 A2 landscape format / separate Doc-ID required per sheet
 A3 landscape format
 A4 portrait / landscape format
 For drawing formats larger than A2, a minimum character height of 2.5 mm shall be used.

Contractual language of documentation:

English

Operating manual language:

English

Symbols / units of measurement:



Metric and US units

Types of lever arch files to be used for the documentation:

Black colour File (Folder/Binder), made from plastic or Cardboard laminated with polypropylene film, 4-ring lever arch file (double DIN A5 Cross-wise storage), with edge protection and grip holes (locking eyelets), 70 mm wide (back width), with transparent plastic spine pocket for insertion of interchangeable labels.

Dividers:

Paper weight @ 160g/m²
 Dimensions 240mm * 105mm
 Colour white



Plant 1.0 MTPA ALUMINA REFINERY STREAM-5	Client NALCO	Contract Code NAL	Document ID 6695-PDM-G00-BD-0002	Contract No. 66-6695
	Vendor's Documentation			 नेशनल एल्युमिनियम कम्पनी लिमिटेड National Aluminium Company Ltd.
				Rev 00 Page 13 of 15

Attachment 02: Number of copies

During engineering approval the drawings / documents shall be submitted via e-mail to the taskforce e-mail-ID or through the collaboration tool. In addition, hard-copies (paper prints) shall be submitted according to "Summary of Engineering Documents" / "Document Request Form" attached to technical specification and/or as per the protocol of negotiations while placement of purchase order.

Minimum number of paper copies of documentation files:

Documentation Type	Number of Sets
<u>draft</u> Construction Documentation (for approval)	Electronic Submission
Construction Documentation (after approval)	2 Sets + 3 CDs
<u>draft</u> Final Documentation (for approval)	Electronic Submission
Final Documentation (after approval)	6 Sets + 3 CDs

Plant 1.0 MTPA ALUMINA REFINERY STREAM-5	Client NALCO	Contract Code NAL	Document ID 6695-PDM-G00-BD-0002	Contract No. 66-6695
	Vendor's Documentation			 नेशनल एल्युमिनियम कम्पनी लिमिटेड National Aluminium Company Ltd.
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Attachment 03: Instructions for submission of drawings / documents electronically to EPCM Contractor



- Vendor shall submit only soft copies (pdf) to EPCM consultant for review. Hard copies shall be submitted to EPCM consultant only for Construction / Final / As-Built Documentation.
- As far as possible Vendor shall prepare pdf file directly from the source/native file/application. In exceptional cases scanned pdf files shall be accepted. Care shall be taken that e-mail size (Total data size for drawings, documents and transmittals for one submission) does not exceed 5 MB.
- pdf file of document shall be sent through authorized e-mail-ID of the vendor as agreed during Kick-off-meeting. Vendor to maintain the Original signed copy as master copy and to be offered for verification for EPCM Contractor's / Third party Approval Agency's inspector upon request / during audit.
- Name of the pdf file shall be: Doc-ID_Rev_TON_short description.

For example for equipment TON 24F001 General Arrangement Rev.00 file name shall be;

NNNNA-AA-XXXX-DZ-NNNNN-NNN_00_24F001_GA.pdf

Following restrictions shall be taken into account to avoid problems while transfer of documents through e-mail / ftp server.

- Length of file name must not exceed 128 characters. The whole length of path name and file name together must not exceed 200 characters.
- Blanks are not allowed (use underscore “_” instead of blank to separate parts of names)
- Special characters (e.g. / , \ , : , * , ? , “ , < , > , !) and umlauts are not allowed
- Transmittal shall be prepared for documents to be sent to EPCM consultant clearly indicating EPCM consultant Contract No., PO No., TAG No., EPCM consultant Document ID, Revision and document description.
- pdf files shall be sent to EPCM consultant by e-mail to EPCM consultant's Task Force e-mail-ID or to be uploaded in the collaboration folder as advised.
- Each e-mail should contain files related to one transmittal only. Separate e-mails shall be sent for 2 different transmittals. Subject of the transmittal shall indicate EPCM consultant's Project No. at the start and followed by the transmittal reference number.
- Date of receipt of document shall be considered only when EPCM consultant can open and view the documents and transmittal properly. If EPCM consultant can't open or view the documents submission will be treated as invalid / void. Vendor shall ensure that pdf files shall not be encrypted or protected.
- After reviewing document EPCM consultant shall return approved/commented documents with transmittal by e-mail. No hard copy shall be sent. Once the commented documents are received by vendor, vendor will submit the revised documents with next revision within a period of ten (10) working days. As far as possible vendor shall not change the position of details in the drawing / document in next revision.
- In-case documents are not received back with approval / comments within 2 weeks of submission to EPCM Contractor, vendor to send expediting/follow-up mail to EPCM consultant's Taskforce e-mail-ID
- Vendor shall maintain document index with EPCM consultant's Doc. ID-Code, date of submission & date of return. The same shall be sent for EPCM consultant's information on monthly interval.

Plant 1.0 MTPA ALUMINA REFINERY STREAM-5	Client NALCO	Contract Code NAL	Document ID 6695-PDM-G00-BD-0002	Contract No. 66-6695
	Vendor's Documentation			 नेशनल एल्युमिनियम कम्पनी लिमिटेड National Aluminium Company Ltd.
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Attachment 04: Structure of documentation binder

<div> <div>ThyssenKrupp Industrial Solutions (India)</div> <div>Contract No.: NN-NNNN</div> <div>Documentation type</div> <div>Customer</div> <div>Short code Place</div> <div>Technical discipline</div> <div>Site or Unit</div> <div>TON / TAG</div> <div>Designation</div> <div>Group File number Record Addressee 1/10</div> <div>Doc Id Code</div> </div>	<div> <div>UAN:</div> <div>Documentation type:</div> <div>Customer:</div> <div>Customer name:</div> <div>Place:</div> <div>Technical discipline:</div> <div>Site or Unit:</div> <div>TON/TAG NO.:</div> <div>Table of contents:</div> <div>Supplier:</div> <div>Group:</div> <div>Volume:</div> <div>File:</div> <div>Doc Id Code</div> </div>										
	<div> <div>BULK MAT. for piping, electr., instr.</div> <div>Valves, special components</div> <div>Process vessels</div> <div>Electrical + instrumentation</div> <div>Machines without connected piping</div> <div>Package/machine + connect. piping</div> <div>Infrastructural + sanitary facilities</div> </div>										
	<div> <div>Cover sheet</div> <div>Table of contents</div> <div>Group 01</div> <div>Group 02</div> <div>Group 03</div> <div>Group 04</div> <div>Group 05</div> <div>Group 06</div> <div>Group 07</div> <div>Group 08</div> <div>Group 09</div> <div>Group 10</div> <div>Group 11</div> </div>										
	<div> <div>P I diagrams 1)</div> <div>Foundation data 1)</div> <div>Overall arrangement drawings 1)</div> <div>Detailed drawings, part lists and documentation 1)</div> <div>Fabrication instructions 1)</div> <div>Transport data 1)</div> <div>Electrical + instrumentation 1)</div> <div>Special doc./catalogues of inst. single components 1)</div> <div>User instructions erection plan, installation instructions + drawings 1)</div> <div>Operating and maintenance instructions)</div> <div>Fabrication + inspection documents</div> </div>										
	<div> <div>Erection documentation</div> <div>Final documentation</div> </div>										
	<div>Remark 1) if required / available</div>										
	<div>Groups 12 + 13 are contained in Group 10 Operating + maintenance instructions</div>										
