COMPANY STANDARD INSTRUCTION

POSITIVE ISOLATION OF PIPING AND EQUIPMENT

Instruction Number: IN-250-HSE-28

Document Classification: Internal

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	Position	**CHSEQO**	
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Rev.	Date	Prepared by	Reviewed by			
01	30 / August / 2020	SHSEO / SSO	HSESM	HSEQGM	CENGO	COO

Revision / Modification History:

Rev #	Date	Section No.	Reason for revision / modification
00	13-06-2011	All	New Piping Isolation PR-251-SF-17
01	30/08/2020	All	Procedure PR-251-SF-17 is converted to instruction as per Quality documentation System. Title of the document has been changed from Piping Isolation to Positive Isolation of Piping and Equipment Below Mentioned points added in the instruction. • Roles and responsibilities updated • Tagging system for blinds identification • Shared blind concept • PTW cross referencing in blind list • Process Flow • Hydrotesting blinds made as a sperate process • Management of Permanent blinds • Appendix

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Contents

1. OBJECTIVE

To protect personnel, assets and environment from any harm by implementing systematic approach to carry out positive isolation (e.g., blinding, plugging, disconnection etc.,) of the process systems, that are being handed over for maintenance or project jobs as described in the scope.

This instruction will help to avoid risk of exposure to the people due to release of hazardous, non-hazardous, and pressurized fluids or exposure to energy which are contained in the process pipelines or vessels

2. SCOPE

This instruction is applicable to all activities within Petrochemicals Shared Services (PSS) operated by QAPCO to achieve positive isolation of the process systems for energy isolation during maintenance or project work such as but not limited to the following:

- Any cold or hot work
- Hydro testing or pressure testing jobs
- Confined space entry
- Production jobs
- Process systems for any process fluid, i.e., hazardous and nonhazardous.
- Operation activities to prepare (commissioning, decommissioning) the pipeline or any other equipment and maintenance activities for how to install blind or carry out any other maintenance activities are not part of this instruction. Operational activities and maintenance activities should be carried out as required by activity specific instructions or procedure.
- Safety valves, control valves, any Instrument or any pipe spool drop for repair/calibration etc., all open ends of the connected piping shall be end blinded as per the pipe specs by the Executor and is not covered under this instruction (i.e., no need to prepare Positive Isolation Form)

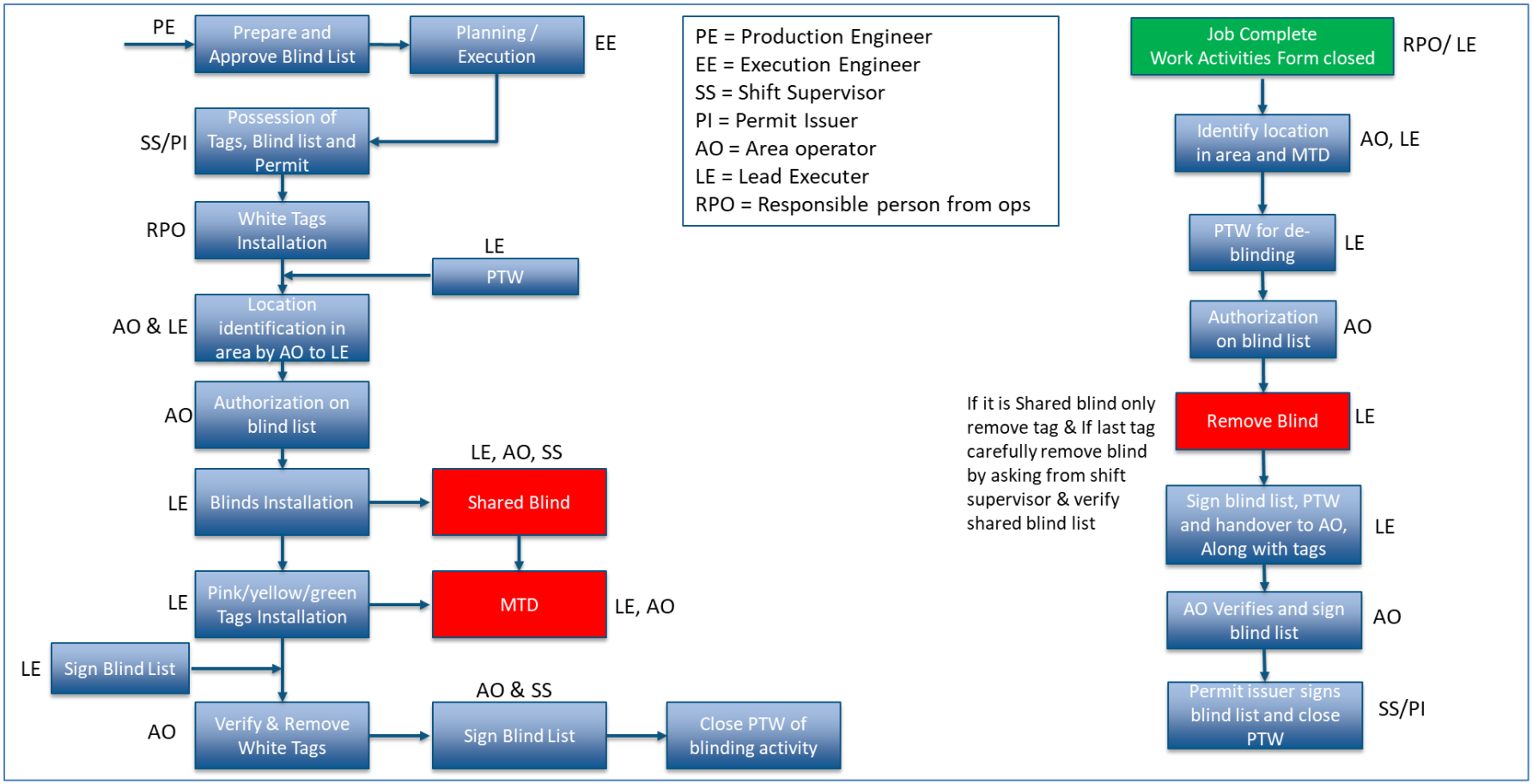
This instruction does not include normal isolation of the valves and electrical switches etc., which is being covered by LT&T procedure.

3. INSTRUCTION SUMMARY

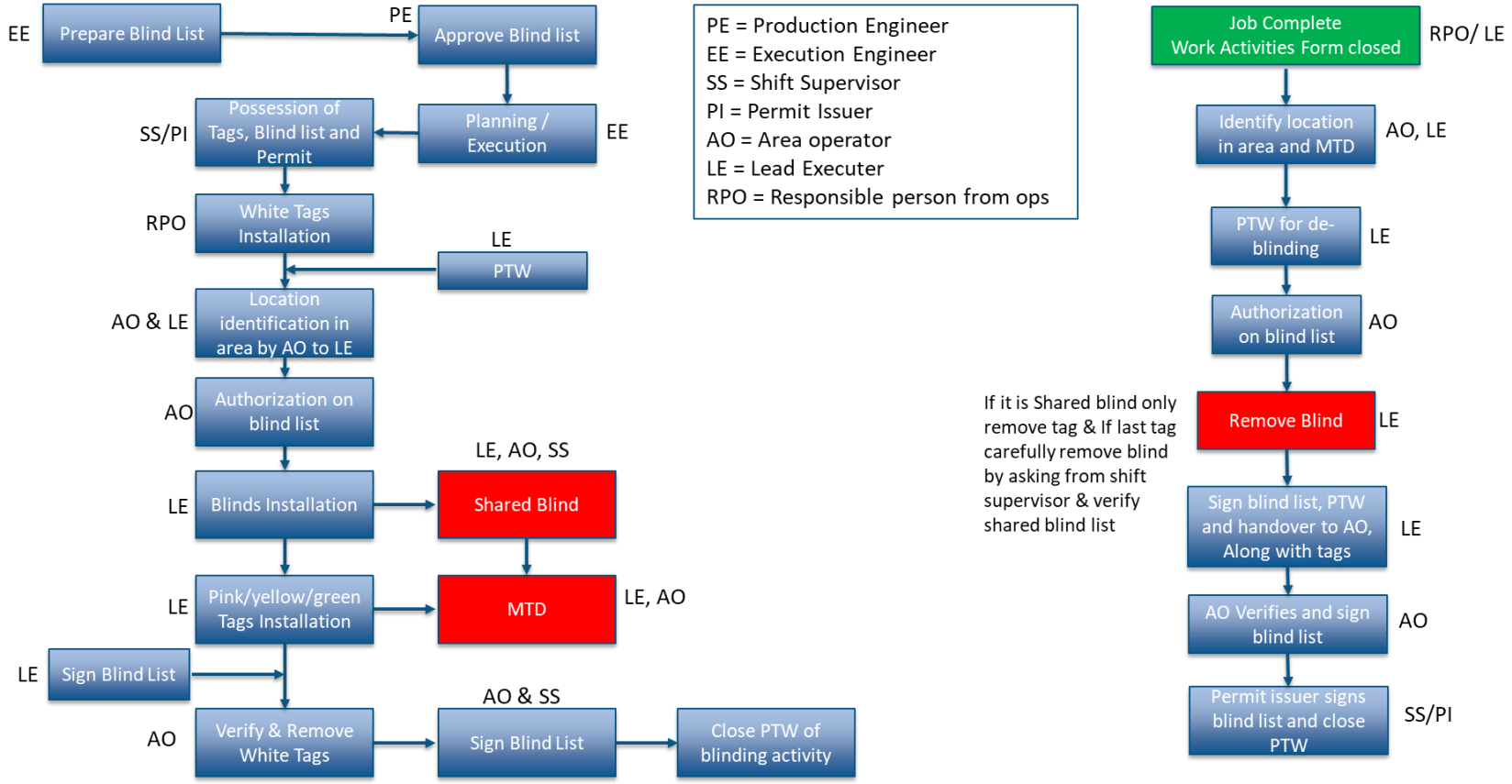
This instruction describes the positive isolation methodology and systematic approach towards achieving positive isolation for critical work activities. It describes identification of positive isolation locations for a specific job using P&ID marking, mentioning the specific positive isolation locations in Positive Isolation Form/Blind list, tagging requirement by operation and executor, types of positive isolation, methods, roles and responsibilities of various disciplines etc.,

This instruction will help to reduce the risk of exposure due to release of energy during the execution of critical activities and will reduce possibility of missing positive isolation locations.

3.1 FLOW CHART FOR PROCESS BLINDING



3.2 FLOW CHART FOR HYDROTESTING BLINDING



4. ABBREVIATIONS / DEFINITIONS

#	Abbreviation / Key word	Definition summary
1	Blinding / Positive Isolation (Blinding Execution)	A positive means of isolation of equipment or process lines by using devices such as spade, blind flange, spectacle blind, caps, plugs or disconnection.
2	Spade or tail blind	A sheet of metal (having a tail with small hole) for separating two flanges effectively with no leak
3	De-blinding / Blinding normalization	De blinding is the process of removing blinds or normalizing the positive isolation from all identified locations as per blind list (positive isolation form), after the required job is completed.
4	Blind Flange or end blind	Blind attached to dead end of a flange
5	Spectacle blind	A standard blind, (which could be reversed to act as a spacer), which is shown in P&ID for positive isolation during normal running/shutdown.
6	Hydro-test blind	A standard blind used normally for hydrotest with thickness to match the hydrotest pressure based on pipe specifications.
7	BL and HTBL	To distinguish between the Process Blind Tags (BL) and Hydro test Blind Tags (HTBL), the HTBL Blind tags shall have a 10 mm "Black" Band at the END of the tag on both sides
8	Permit Executor	Permit Executor as mentioned in Permit to Work Procedure
9	Permit Issuer	Permit Issuer as mentioned in Permit to Work Procedure
10	Process Blind list	A blind list used for handing over for maintenance jobs (except hydrotest), prepared, reviewed and approved by Production, Latest P&ID (A3 size), marked for blind location is attached with the list.
11	Hydrotest Blind List	A blind list used for hydrotesting job, prepared by Maintenance or ESD, reviewed and approved by Production, Latest P&ID (A3 size), marked for blind location is attached with the list.
12	Blind Tag	Blind tag is the tag hung on each blind location. It is a standard tag made in different colors and sizes. These are used for the following purposes: • To identify and mark the blind location before execution of work. • To identify if the installed blind is for maintenance or for project job. (See the color code below) • To identify the shared blinds Tag Numbers and other information shall be engraved or written with permanent marker on it. At the back of each blinding tag, it shall be mentioned that "Removal requires a Permit". Color code for the Blinding Tags are as follows: • White for Location Identification for installing new blinds • Yellow for Maintenance Jobs [except ESD jobs] • Pink for major projects Jobs only • *Green for ESD Jobs only*

		Please note that hydrotest blind will use the same color of tag mentioned above with 10 mm "Black" Band at the END of the tag on both sides ***Note:*** *Tags color can be changed on the request of respective department manager with the approval of Safety Manager.*
13	Tag board / Blind Status Display (during TA/GSD)	During TA or GSD since multiple equipment / lines will be blinded, in order to follow up the status, plant may use appropriate methods to display the status of the blinds in tabular form like White board or A0 paper displayed on the wall. This will be located at the permit issuer's office. This contains the unit wise list of all the blind lists in the plant. This list shall be updated for blinding/ de-blinding so as to track the status of all the blinds in the plant. The blind tags are kept in a safe location (example: Pigeon boxes) and can be verified as per the status on display board.
14	Shared blind	Any blind required at same location by multi disciplines. It is identifiable at the physical location in the plant as **Multiple Tagging Device** is installed on all shared blinds. ***Note:*** *Shared blind should be of highest-pressure blind requirement*.
15	Multiple Tagging Device (MTD)	A standard device that must be installed on the shared Blind; to hang blinding tags by using metallic cable ties. This device also helps in tracking the shared blinds in the field.
16	Solo blind	Solo blind is a physical blind which is not shared by the disciplines / more than one blind list. It is only required for execution of one job.
17	Shared blind list	A list that specifies the location of shared blinds for isolating the process lines or equipment to achieve safe maintenance, modification or hydrotest jobs.
18	Tag Number	This is the blind list number followed by the serial number of the blind. For e.g., If the blind list number is PL-BL-XX-YY-ZZ, • PL denotes plant ID e.g., EP1, LLD, CHL etc., • BL denotes process blind "BL" or hydro test blind "HTBL" • XX denotes unit number 46, 14, 18 etc., • YY denotes serial number of master blind list 001, 002 etc., or equipment number or IR (inspection report) number or MOC number as applicable • ZZ denotes serial number of blinds in a specific blind list (positive isolation form) The above number shall be engraved on a metal tag / hand written by a permanent marker, e.g., EP1-HTBL-13-IR09-01 or VCM-BL-14-IR201-05 or LLD-BL-10-V6001-03 etc.,

19	Disconnection	The operation of disconnection involves isolation of a line or a vessel by physically removing a part of the concerned pipe from the working area.
20	Plant Operations	Responsible person from production designated by plant manager to carry out defined task
21	Maintenance/ESD	Responsible person from execution designated by Execution department manager to carry out defined task
22	CHSEQO	Chief Health, Safety, Environment, and Quality Officer
23	COO	Chief Operations Officer
24	CENGO	Chief Engineering Officer
25	HSEQGM	Health Safety Environment and Quality Group Manager
26	HSESM	Health Safety and Environment Support Manager
27	SSO	Senior Safety Officer
28	SHSEO	Senior Health Safety and Environment Officer

5. DOCUMENT REFERENCES

#	Document ID	Document name	Summary of dependency or use
1	M-250-PSS-01	HSE Integrated Management System (IMS) Manual	Procedure follows the guideline given in the manual and ensure meeting required IMS standards
2	PR-PSS-114	Permit to Work Procedure	Gives connection to permit procedure and practice to perform blinding / de-blinding
3	PR-PSS-127	Job Safety Analysis	Provides information for JSA in case of requirement while carrying out activities mentioned in this procedure
4	PR-250-HSE-05	Hydro-jetting pressure testing procedure	Communicate the blinding requirement while performing hydro test

6. RESPONSIBILITIES (AS APPLICABLE)

#	Job Title	Responsibilities
1	**PRODUCTION ENGINEER/SUPERVISOR**	a) Prepare, approve, and update Process Blind List. b) Consult execution engineer for blinds specification/rating. c) Submit approved blind list to the Planning or Executions. d) Make available the Approved Blind List for permit issuer.

		e) Keep Blind List updated and record it to use in future as and when required. f) Ensure blinding tags submitted by execution are correct. g) Identify and mark shared blinds in the blind list for the jobs. h) Prepare and maintain a separate list for shared blinds during shutdown, special attention is required for any new blind that were not identified well in advance. i) Approve hydrotest blind list issued by Maintenance, ESD or Project section. j) Prepare general blind list for any job requires removal of any equipment like pumps, blowers or similar equipment whenever required. ***Note**: In the absence of production engineer (off hours), shift supervisor shall prepare the blind list and to be approved by guard duty of that plant.*
2	**PERMIT ISSUER (SHIFT SUPERVISOR)**	a) Shall ensure that the copy of the approved blind list is attached with the relevant work permits. b) Take possession of all type of blinding tags and shall hand over the required blinding tags to the Lead Executor along with work permit. c) Shall update the Tag Board / Blind Status display accordingly. d) Shall ensure the shared blinds reported by the Area Operator are registered in the approved blind list and in the shared blind list (separate sheet), if not included originally. e) Shall close the permit for blinding work only after ensuring that the blind list is signed off by the concerned operator and executer and the tag board / blind status display is updated accordingly. f) Shall close the de-blinding permit only after ensuring the sign off the related blind list by the operator and executer, return of all blinding tags as per blind list. Once permit is closed issuer to update tag board / blind tag status display by himself.
3	**LEAD EXECUTOR (PERMIT RECEIVER)**	a) Shall obtain the copy of the Process / hydrotest blind list and attach it to the work permit. *b) After having physical blinds installed; Shall install yellow, or pink, or green tags at the identified location.* c) Shall inform Area Operator if any blind is becoming a "shared blind" *(if not identified before on the blind list).* d) Shall not remove/install any blind/blinding tag without valid work permit.

		e) Shall provide and install multiple tagging device whenever required for shared blinds. f) Shall provide end blinds as per pipe specs when any job requires removal of any equipment like control valve, safety valve, pumps, pipes, spools or similar. g) Shall install blind with correct specifications e.g., type, size, rating etc., as per blind list. h) Shall sign the blind list after installation/removal of *each* blind.
4	**AREA OPERATOR**	a) Area operator shall ensure that the equipment to be blinded for execution is decommissioned and depressurized before handing over the Blinding execution job. b) For better planning prior to TA / GSD/tie-in, shall install White Tags in advance. c) While hand-over the blinding/de-blinding jobs, he shall show all the locations to the Lead Executor where blind and blinding tag must be installed *and sign the authorization section on blind list* d) Ensure identification tags (white) for process blinding are intact, if missing he shall report to Permit Issuer for providing a replacement tag. e) While signing off the work permit for blinding job, he shall verify physically if all blinds/blinding tags are installed as required f) After blinding job area operator shall remove and count /match all the white tags. g) In case of any abnormality observed, he must re-check if the blinds/blinding tags are installed as required. h) Identify shared blinds by ensuring that multiple tagging device is firmly installed on the physical blind in the field. Feedback to Permit Issuer whenever any MTD or new Blinding Tag is required to be installed. i) It shall be verified by the area operator that the blinding tag numbers matches with the one in blind list. j) Shall sign off the master blind list after blinds are installed and shall sign before handing over the de-blinding job. k) Shall remark in the master blind list whenever a new shared blind is identified and inform Permit Issuer. l) In case if a blinding tag is lost (while blinding or performing the job under blind list), immediately he should stop the work and ensure that all the blinds are intact or not and inform Permit Issuer

5	**MAINTENANCE/PROJECT ENGINEER/SUPERVISOR**	a) Shall ensure that the blinding procedure is strictly followed for the job under his jurisdiction. b) Shall ensure sufficient training through HSE Support to Contractor Executors for blinding job, before delegating it to the contractors. c) Shall support production regarding blinds specification/rating while preparing blind list. d) Review process blind lists received from Production Engineer/Supervisor from execution point of view and prepare blinds as per specifications and rating required. e) In case of any doubt or new jobs / blinds, may consult inspection or engineering to decide blind specifications and rating if required. f) Shall prepare and update the Hydrotest Blind list and send it to concern Production Engineer/Supervisor. for approval. g) Shall provide tags *(Yellow, Pink or Green)* well in advance to production engineer to verify the tag numbers matching (White tags and *yellow/pink/green).*
	PLANNING ENGINEER	a) Planning for blinding jobs shall be made available and must be updated as and when required to install the blinds. b) In TA / GSDs, planning for marking of blinding locations (installation of white blinding identification tags) shall be made available well in advance and in consultation with the area engineer to avoid any delays.
	INSPECTION ENGINEER/ ESD (MECHANICAL ENGINEER-CONSTRUCTION)	a) Provide support and advice for blind rating as and when required for specific activities
	HSE / SAFETY OFFICER	a) Prepare and update procedure as and when required. b) Provide training and create awareness for the procedure implementation during normal operation as well as during TA/GSD

7. INSTRUCTION METHOD

7.1 GENERAL

It shall be the responsibility of the plant operations to isolate all forms of energy; prepare and hand over the equipment for the purpose of any invasive works.

The plant operations shall define and implement credible methods to secure and maintain the integrity of isolation during the invasive works.

The plant operations shall identify all the locations where positive isolation shall be performed on a marked-up P&ID along with Positive Isolation Form (blind list, Appendix 9.1). Approved marked up P&ID and Positive Isolation Form (blind list) shall be made available to permit issuer and executor in advance specially for shutdown or tie-in jobs to avoid delays and for effective planning and selection of appropriate blinding method.

Joint site visits by senior staff Production & Execution personnel are advised before finalizing any blind list.

Bind list must be signed off whenever blinds/blinding tags are installed or removed.

Manholes opening or any other opening of the Vessel cannot be part of the blind list, as any manhole opening is allowed only after vessel is completely blinded. The vice versa is also true. Blind normalization can only be done after all the open points (manhole and any other open flanges) of the vessel are closed.

Standard caps or plugs compatible with the piping/equipment design shall be used in place of blinds for isolation of threaded connections (e.g. instrument air tubing, analyzer connections, etc.). These caps or plugs serve the same purpose as blinds and shall be included in the blind list.

7.2 LEVELS OF BLINDING

Three levels of blinding are present in QAPCO:

- **Level 1**: This blinding isolates the battery limit of each unit / plant.
- **Level 2**: This blinding isolates between subsystems
- **Level 3**: This blinding isolate and allows entry inside the equipment

In case of having several levels of blinding on a specific circuit or unit, the level 1 blind shall be at the maximum process pressure rating (P1); the others subsequent level (level 2) can be at maximum utilities pressure (e.g. 10 barg i.e. a P2 blind).

It shall be the responsibility of the executing party to install “P1-standard blind” as a 1st priority (maximum process pressure rating). **In the event they cannot execute this due to piping or space constraints then “estimated” blind can be inserted.** The estimation for the blind thickness shall be performed by Maintenance / ESD from the process data supplied by the plant operations (Refer blind list). This estimated blind is termed as P3.

If both the above cases are not feasible, a risk assessment shall be performed to establish other measures. The risk assessment team members shall comprise of Executor, Plant operations, Inspection, and Safety. The team shall also review the requirement to stop the plant or postponing the blinding till shutdown.

Blind spades for P2 shall be used only when the plant operations confirm that the system is positively isolated by P1 or by Level 1 blind at the battery limit and the maximum pressure that can be encountered in the sub system during the entire invasive work period.

If a single blind is used for two positive isolation plans, then this shall be treated as shared blind. This blind shall be of the *higher-pressure* rating of all the shared blind lists. Plant operations shall be responsible for ensuring the integrity of the shared blind.

In any piping operating below 10 barg pressure the <u>minimum</u> blind rating shall be 150# class unless otherwise specified.

The following color code shall be used for QAPCO blinds:

	Type of spade blinds	Color
P1	Standard	No color
P2	Up to 10 barg	YELLOW
P3	Estimated	RED

Hydrostatic /Pressure Testing

Executor shall prepare and update the Hydrotest Blind list and send to concerned Production Engineer/Supervisor for approval.

All blinds for hydrostatic pressure testing shall be of the maximum pressure rating (P1). The hydrostatic testing shall be carried out in accordance with Hydrostatic Pressure Testing Instruction (IN-301-INT-210).

IN ORDER TO AVOID AN INADVERTENT BLINDING TAG LOSS, FOLLOWING MUST BE FOLLOWED:

Use standard metallic cable ties or suitable material to tie up the tags with blind

Each blinding tag installed must have its own individual metallic cable tie.

To connect more than one metallic cable tie to the blind which is required in case if it is a shared blind, multiple tagging device (MTD) shall always be used. MTD must be firmly tightened to the blind.

The blind tag shall be fixed to the hole on the tail of the spade and in case of end blind it should be on one of the bolts or if not possible, then shall be tied on the same pipeline close to the flange and fixed firmly so that the tag doesn't move.

<u>Note:</u> *In case of selecting the alternate method to tie up the tags, approval shall be taken from safety manager*

7.3 REMOVAL AND INSTALLATION OF BLINDS AND BLINDING TAGS:

Lead Executors are not allowed to install or remove any existing or new blind/ blinding tags without a valid work permit *and authorization on the blind list.*

Whenever any other job e.g., dropping of spool piece etc. or similar does require to drop the existing physical blind, Lead Executor must apply for a separate work permit for it.

Permit Issuer shall withdraw all the existing permits for the jobs which are using this blind; he may resume the work after blind is reinstalled or alternative is provided to continue the work safely.

7.4 IDENTIFICATION OF LOST BLINDING TAGS

For Solo blinds

Solo blinds are easily identifiable in the field as they do not have MTD installed. These blinds are having only one blinding tag (yellow, or pink, or *green*), tag loss on these blinds is having no major safety implications as they are easily traceable.

For shared blinds

Shared blinds are easily identifiable in the field as these have an MTD installed. These blinds are having more than one blinding tag (yellow/pink/*green*), if any tag is lost it is not easily identifiable in the field. Therefore, a list shall be maintained separately to keep track of shared blinds and no. of tags installed on them.

Area Operator shall verify if there is any job going on using same blind through work activities form. The recording system should be made traceable to find out if any blinding tag is missing. Requirement in section 7.2 shall strictly be followed to reduce the number of missing tags.

7.5 HANDLING OF LOST BLINDING TAGS WHENEVER IDENTIFIED:

In case if a blinding tag is lost; as an immediate measure, a hand-written standard tag must be provided having similar specifications and before any use. Blind lists must be updated accordingly.

7.6 PERMANENT BLINDS

In case of permanent blinds, it should be clearly mentioned in the blind list that the blind is permanent and shall not be removed. Write in advance in blind normalization section **"Do not remove, Permanent blind".** Same is applicable if a permanent blind is used as a shared blind. Install do not operate tag in permanent blind location.

7.7 INSTALLATION PROCESS OF BLIND AND BLINDING TAGS

STEP 1: Marking of Blind Locations before start of blinding job

No	DESCRIPTION
1	Responsible person from operations will install White Tags for marking the blind location as shown in marked up P&ID and Positive Isolation Form.
2	Marking shall be done well in advance of the actual blinding job especially for shutdown activities, plan should be prepared accordingly. Also, during shutdown activities, tag board / Blind status display shall be followed to keep track of blinding status. For normal plant operation, installation of white tags can be done just before execution of blinding permit.
3	Whenever any blind is identified as shared blind, Area Operator shall note it down on the attached blind list and shall report back to Shift Supervisor (permit issuer). Approved blind list, tag boards / Blind status display and shared blind list must be updated accordingly.

STEP 2: Execution

No	DESCRIPTION
1	Lead Executor shall apply the permit for blinding job as per the specified blind list.
2	Permit Issuer will appoint an Area Operator for necessary preparation.
3	Lead Executor will be called for hand over the job when preparations are completed, and permit is ready to issue with Approved Blind list copy and the Yellow/Pink/*Green* tags.
4	Area Operator will show all the location for installing the blinds to the Lead Executor before handing over *and sign the authorization part on the blind list*
5	After completion of the blinding job, Lead Executor will fix the yellow/pink/*green* tags at the blinding locations together with the white tags (if removed while blinding) and shall inform the Area operator, who will check the blinds for specified locations, etc., and collect the white tags from the location
6	If Lead Executor comes across any location where the blind is already installed, then: • He shall inform the Area Operator

	• In the presence of Area Operator, he shall firmly install the Multi Tagging Device (MTD) on the blind. • Install his blinding tag on the newly installed MTD • Re-install the existing blinding tag on the newly installed MTD by using a separate cable tie. • The blind is identified as shared blind in the field and verify / update in Positive Isolation Form. ***Note:*** *Verify the pressure rating of the blind in case of shared blind. The blind rating should be the maximum required pressure*

STEP 3: Job Completion and Closing of the Blinding Permit

No	DESCRIPTION
1	When the blinding job is completed; Lead Executor will contact the Area Operator for closing the permit and shall sign Approved Blind List.
2	Area operator shall check if the blinds are installed at the specified locations, flanges are tightened properly, etc., collect the white tags from the location and keep them at the designated location in the CCR
3	If everything is OK Operator shall sign off the permit and Approved Blind List.
4	Permit Issuer shall sign off the permit and ensures that the Approved Blind List is signed and updated by all for marking the relevant changes in the blinding status. All relevant lists and boards must be updated accordingly.

7.8 DE-BLINDING JOB:

No	DESCRIPTION
1	Blind/blinding tags shall only be removed when all the relevant jobs are completed, and linked permits / certificates are closed.
2	Lead Executor shall apply the permit for de-blinding job as per the specified blind list (Positive Isolation Form)
3	Permit Issuer will appoint Area Operator for necessary preparation and issuance of work permit

4	Lead Executor is called for hand over the job when preparations are completed, and permit is ready to be issued.
5	Area Operator will show all the location for de-blinding/de-tagging to the Lead Executor *and sign the authorization section on the blind list*. He shall observe following: • Shared blinds are clearly visible as MTD is installed on them. • In case of shared blinds, if there are more than one blinding tag then only the corresponding blinding tag shall be removed. • If there is only one blinding tag left on the blind or MTD, both physical blind and blinding tag shall be removed. In this case he shall check with Shift Supervisor for any other activity using the similar blind before removing shared blinds due to the fact that 2nd Blind Tag might be lost or missing. • Verify the master and shared blind list records to ensure that no blinding tag is missing, and it is safe to remove the physical blind.
6	When the de-blinding job is completed; Lead Executor will contact the Area Operator for closing the permit and shall sign Approved Blind List.
7	Lead Executor shall hand over the blinding tags to Area Operator whichever is removed.
8	Area Operator shall verify if all the required tags are removed from the specified locations.
9	If everything is OK Area Operator shall sign off the permit.
10	Permit Issuer shall sign off the permit, approved positive isolation form / blind list and shall update the blinding status. All relevant lists and boards must be updated accordingly.
11	All blinding tags, which are not in use, shall be collected by Lead Executor.

NOTE:

All permits issued against the blind list should be cross referenced in the work activities form (Appendix-9.7). Permit issuer and Executer are required to sign the form before closing blind list.

8. RECORDS

The following records shall be maintained in support of this Instruction:

#	Record ID	Record name	Responsibility
1		Blind list	Plant operations
2		Blinding tags	Execution department

9. APPENDIX

9.1 POSITIVE ISOLATION PLAN (BLIND LIST)

Form given here is only for information. Please use the form available in excel format for convenience

POSITIVE ISOLATION FORM / BLIND LIST

Equipment / Asset #		Unit #		Blind List #		Work Permit # for Blinding				Work Permit # for De-blinding					

Sr. No	Type of blind	P&ID No.	Line Number	Description	Location	Size / Rating	Process Material			Material	Blind Execution				Blind Normalization				Shared with (Tag No.)	Remarks
							Product	Temp.	Pressure P1/P2/P3		Authorization by Operator	Status	Lead Executer Sign	Area Operator Sign	Authorization by Operator	Status	Lead Executer Sign	Area Operator Sign		

	PREPARED BY	APPROVED BY
Name :		
Date :		
Signature :		

BLINDING COMPLETED

	Executor	Area Operator	Shift Supervisor
Name :			
Date :			
Signature :			

DE-BLINDING COMPLETED

	Executor	Area Operator	Shift Supervisor
Name :			
Date :			
Signature :			

Blinding Type : Spectacle Blind : SB, Blind: B
P1 = Process pressure, P2 = Maximum Utilities pressure, P3 = Calculated blind

*Sr.No. Refer to the attached PID extract.

Blind list to be prepared and approved by Production Engineer or during off hours to be prepared by Shift Supervisor and approved by guard duty

9.2 WORK ACTIVITIES FORM

PROCEDURE NO. : IN-250-HSE-28 **Rear**

Positive Isolation for Piping and Equipment

WORK ACTIVITIES UNDER THIS ISOLATION PLAN						
List of Work Permit to be filled in by Production and checked by Execution.						
Sr. No.	Work Permit No.	Job Description	Date permit issued	Date permit closed	Signature of Executor	Signature of Production
Verified by :	Name :		Date :		Signature :	

9.3 SAMPLE (FILLED) POSITIVE ISOLATION PLAN FORM & MARKED UP P&ID

POSITIVE ISOLATION FORM / BLIND LIST

Equipment / Asset #		Unit #		Blind List #		Work Permit # for Blinding				Work Permit # for De-blinding					

Sr. No	Type of blind	P&ID No.	Line Number	Description	Location	Size / Rating	Process Material			Material	Blind Execution				Blind Normalization				Shared with (Tag No.)	Remarks
							Product	Temp.	Pressure P1/P2/P3		Authorization by Operator	Status	Lead Executer Sign	Area Operator Sign	Authorization by Operator	Status	Lead Executer Sign	Area Operator Sign		
1	Spade	2103	20"-CLD10-210203-BB57NA-K40	Chlorine inlet to VJ210003 from DT-III	Nozzle N1	20" / 150#	Chlorine	18	P1	CS		Installed				Removed			EP1-BL-14-01-01	
2	End Blind	2103	20"-CLD10-210301A-BB57NA-K40	Chorine outlet line from VJ210003	d/s of flange	20" / 150#	Chlorine	20	P1	CS		Installed				Removed			CHL-BL-14-01-01	
3	Spade	2103	1"-ZA-210304-PQ55AB	98% H2SO4 Line from TL210002	Nozzle N7	2" / 150#	H2SO4	25	P2	UPVC		Installed				Removed				
4	Spade	2103	2"-ZA-210302-PQ55AB	98% H2SO4 over flow line from VJ210003	Nozzle N6	2" / 150#	H2SO4	25	P1	UPVC		Installed				Removed				
5	Spade	2103	2"-ZA-210302-PQ55AB	98% H2SO4 drain line from VJ210003	Vessel u/s flange	2" / 150#	H2SO4	25	P1	UPVC		Installed				Removed				
6	Spectacle	2103	2"-ZA-210302-PQ55AB	98% H2SO4 drain line from VJ210003	Vessel d/s flange	2" / 150#	H2SO4	25	P1	UPVC		Installed				Removed				

	PREPARED BY	APPROVED BY
Name :		
Date :		
Signature :		

BLINDING COMPLETED

	Executor	Area Operator	Shift Supervisor
Name :			
Date :			
Signature :			

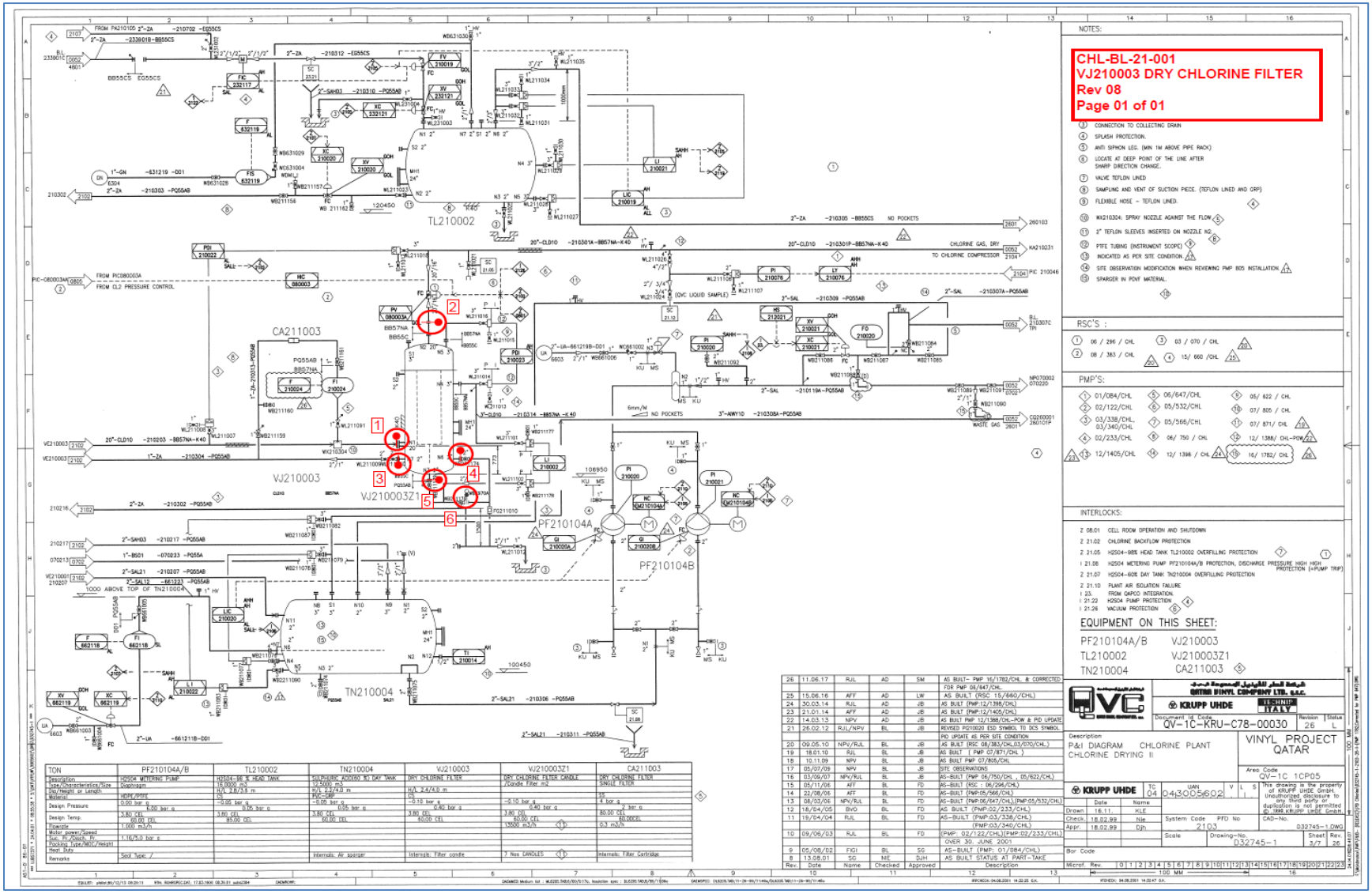
DE-BLINDING COMPLETED

	Executor	Area Operator	Shift Supervisor
Name :			
Date :			
Signature :			

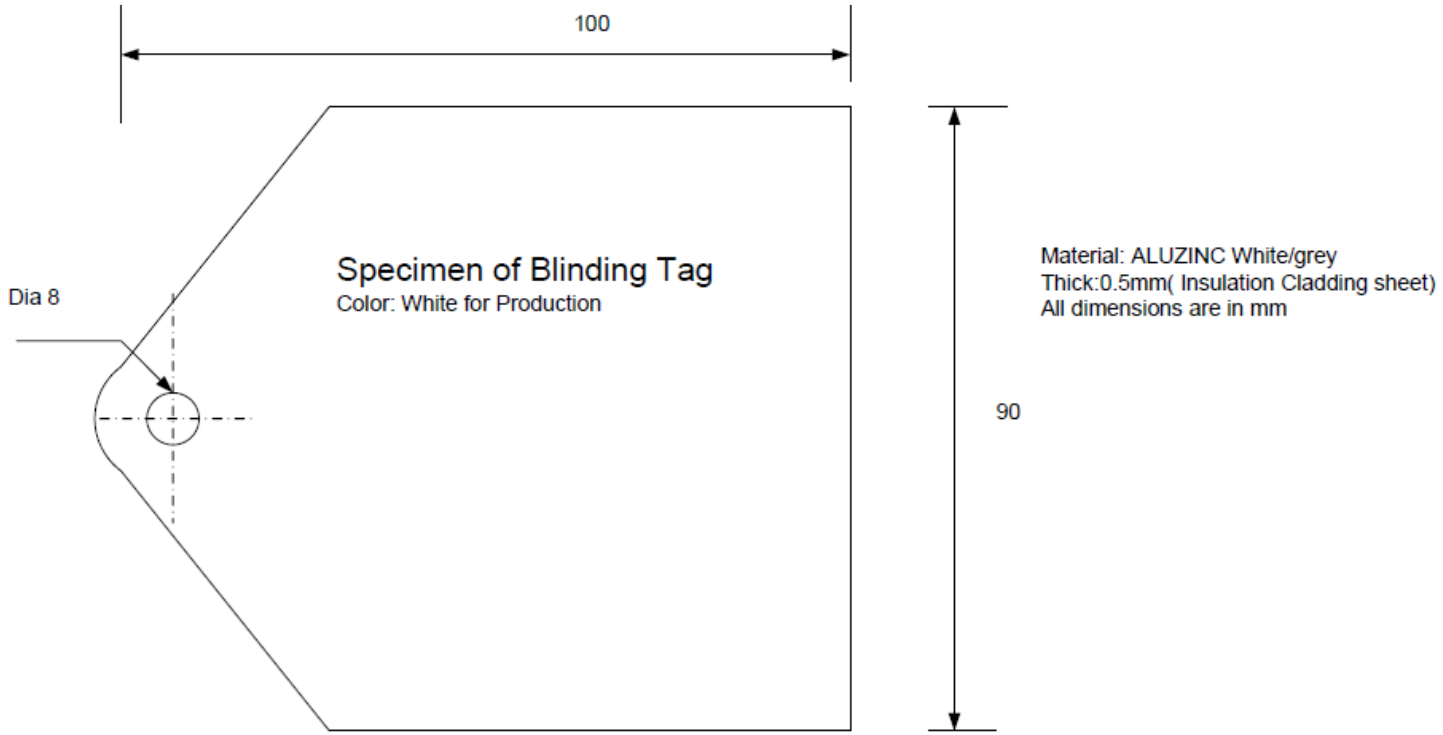
Blinding Type : Spectacle Blind : SB, Blind: B
P1 = Process pressure, P2 = Maximum Utilities pressure, P3 = Calculated blind

*Sr.No. Refer to the attached PID extract.

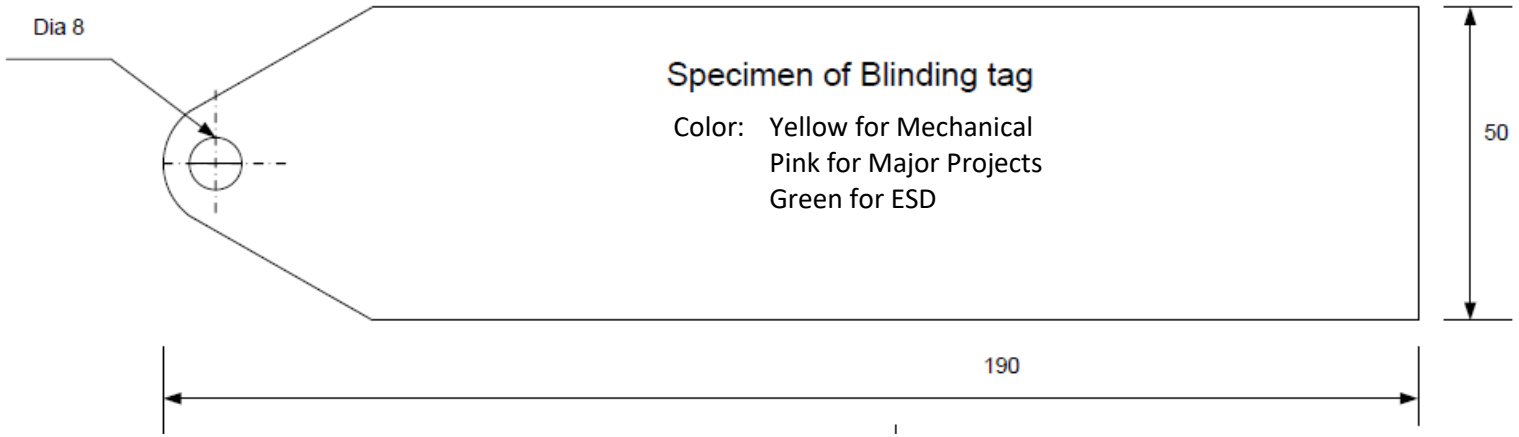
Blind list to be prepared and approved by Production Engineer or during off hours to be prepared by Shift Supervisor and approved by guard duty


CHL-BL-21-001
VJ210003 DRY CHLORINE FILTER
Rev 08
Page 01 of 01
TL210002
CA211003
VJ210003
VJ210003Z1
PF210104A
PF210104B
TN210004
EQUIPMENT ON THIS SHEET:
PF210104A/B VJ210003
TL210002 VJ210003Z1
TN210004 CA211003
P&I DIAGRAM CHLORINE PLANT
CHLORINE DRYING II
VINYL PROJECT
QATAR
KRUPP UHDE
QV-1C-KRU-C78-00030

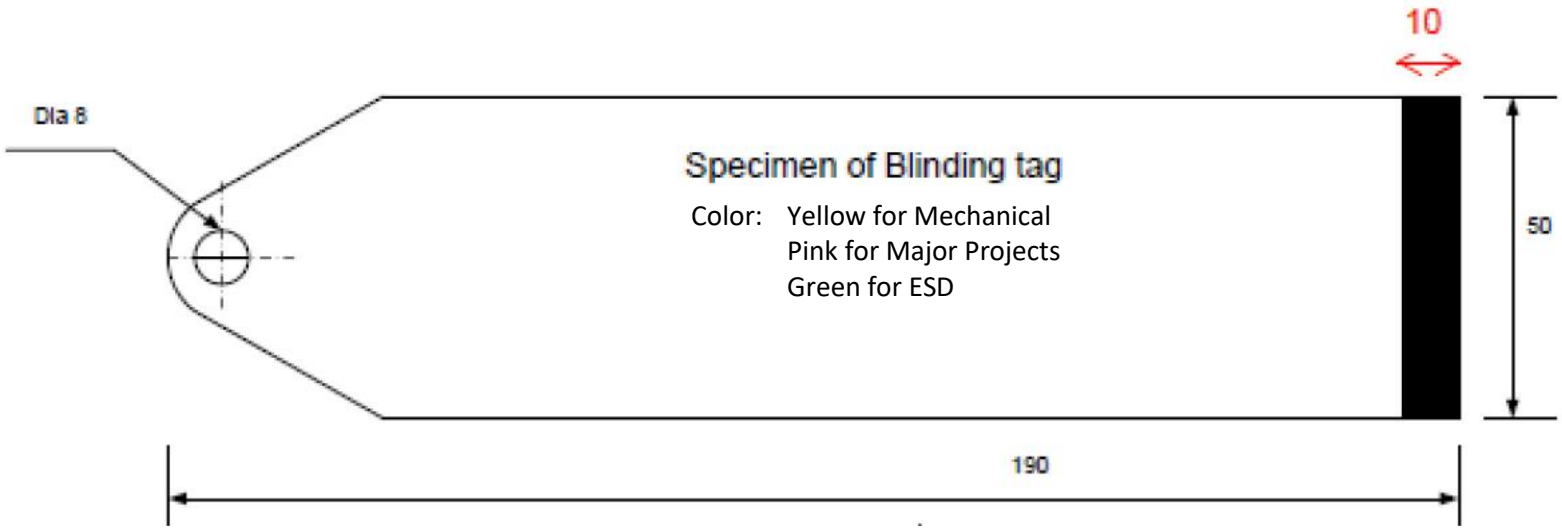
9.4 SPECIMEN OF IDENTIFICATION TAG



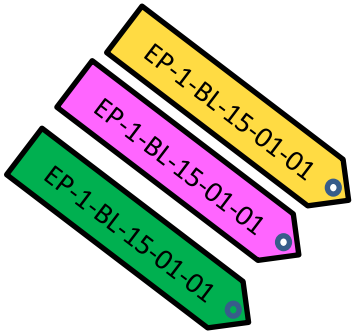
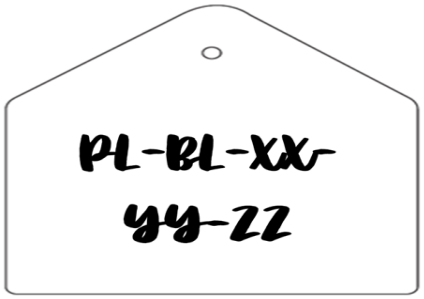
9.5 SPECIMEN OF PROCESS BLIND TAG (BL):



9.6 SPECIMEN OF HYDROTEST BLIND TAG (HTBL):



9.7 BLINDING / DE-BLINDING TOOLS:

	➢ Made from a metal sheet with a **Permanent Engraved Letters** ➢ Contains the **Blind list number** and followed by **blind list serial number** ➢ Painted in yellow for **mechanical** job, pink for **Major project** job and green for **ESD** job
	➢ Made from a white color metal sheet with a **permanent engraved letter** ➢ contains the **blind list number** and followed by **blind serial number** ➢ put in the field at **exact location** of blinding before the blinding job