

ULTRASONIC QUALIFICATION CARD GUIDANCE INSTRUCTIONS

ANDE	OJT/TPE/SELECTION FORM
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Candidate:	Candidate ID Number:
Selected for	
Mark appropriate box below as applicable:	
On-The-Job Training (OJT) <input type="checkbox"/>	
Task Performance Evaluation (TPE) <input type="checkbox"/>	

NOTES:

I have received adequate experience and can perform these tasks in a proficient manner. Candidate Signature: _____	Date: _____
I have observed the candidate successfully performing Ultrasonic Examinations AI/ANI Signature: _____	Date: _____
I have evaluated the subject Candidate's performance and determined results to be acceptable: Approved _____	Date: _____
ANDE Level III	

ULTRASONIC QUALIFICATION CARD GUIDANCE INSTRUCTIONS

CANDIDATE: _____ ID: _____

METHOD: Ultrasonic (Basic)

ACTIVITY TITLE: Inspection Request/Component Information

Applicable Procedures, Drawings and/or Reference Documents:

TASK ELEMENT NO*	ACTIVITY	Action Code	OJT Candidate Initials/ Date	OJT Level II & III Initials /Date	TPE Level III Initials/ Date	COMMENTS / REMARKS
1.01, 1.02	Assignment Sheet: Review: request, work order document(s), component specifics (configuration, material type and thickness, limitations, etc.), Code requirements, applicable drawings,	P				Will require a typical assignment sheet/ work request document. Component configuration drawing
1.03, 1.04, 1.05	Select/Review ultrasonic procedure: Select applicable element for application	P				Need procedures for each component configuration Range shall be specified

* See JTA "Ultrasonic Basic" for identified elements and the associated skills and knowledge.

ULTRASONIC QUALIFICATION CARD GUIDANCE INSTRUCTIONS

EXAMPLE MENTOR DISCUSSION

JOB DUTY AREA: Ultrasonic (Basic)

ACTIVITY TITLE: Inspection Request/Component Information

<p>1. What information will you obtain from a Work Order/Traveler/Process Sheet?</p> <p><i>Acceptable response:</i> Component identification, description and procedure requirements, scheduling information and potential "hold points"</p>
<p>2. What information will you obtain reviewing component history? (if available)</p> <p><i>Acceptable response:</i> Previous NDE Reports (UT procedures, ultrasonic techniques, recorded discontinuities, etc.), repair history,</p>
<p>3. If previous inspection data is not available describe what actions would be required prior to performing calibrations/inspections.</p> <p><i>Acceptable response:</i> A weld profile would be required to be obtained.</p>
<p>4. Why review the referenced UT Procedure?</p> <p><i>Acceptable response:</i> Verify correct selection (Scope, code requirements, UT technique equipment, etc.)</p>

ULTRASONIC QUALIFICATION CARD GUIDANCE INSTRUCTIONS

CANDIDATE: _____ ID: _____

METHOD: Ultrasonic (Basic)

ACTIVITY TITLE: Pre-Examination

Applicable Procedures, Drawings and/or Reference Documents:

TASK ELEMENT NO*	ACTIVITY	Action Code	Candidate Initials/ Date	Level II & III Initials /Date	TPE Level III Initials/ Date	COMMENTS / REMARKS
2.05, 2.06	Readiness Requirements: Assemble required equipment. Verify equipment calibration dates. Condition of cables and transducers. Chemical control stickers for pipe markers and couplant. Calibrate UT system in accordance with weld profile procedure based on assignment sheet/ISO Metric/fabrication drawings. (NDE Certs, Personal Protection Equipment, etc.)					
2.07, 2.08	Weld Profile: Obtain weld profile from component and document. Utilizing weld profiles determine angles, mode of propagation and scanning parameters in order to obtain the maximum percent of coverage in accordance with the applicable UT procedure.	P				
2.11	For FAB/construction – calibrate straight beam transducer with UT equipment in accordance with applicable procedures; scan material adjacent to weld for laminations that may interfere with angle beam examinations.					

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ULTRASONIC QUALIFICATION CARD GUIDANCE INSTRUCTIONS

EXAMPLE MENTOR DISCUSSION

JOB DUTY AREA: Ultrasonic (Basic)

ACTIVITY TITLE: Pre-Examination Activities

1. What is the purpose of a weld profile?

Acceptable Response:

A weld profile is used to determine angles and modes of propagation needed to achieve a Code acceptable examination and obtain maximum coverage. Weld profiles need to be accurate in order to establish correct examination parameters. Normally weld profiles are taken once and used multiple times by different technicians in order to reduce radiation exposure and consistently repeat examinations.

2. Describe situations that would require weld crown conditioning.

Acceptable Response:

Weld crown reduction would be required if the height or surface condition that prohibits scanning across when inspecting stainless steel components and single sided carbon steel components.

3. Explain the repercussions of inaccurate weld profiles.

Acceptable Response:

Inaccurate weld profiles could cause incorrect angles and metal paths to be used for inspection. Potential indications could be missed and create a hazard to the operation of the plant.

4. What to do if there is no weld profile?

Acceptable Response:

Look at radiograph or see Level III to plot.

ULTRASONIC QUALIFICATION CARD GUIDANCE INSTRUCTIONS

CANDIDATE: _____ **ID:** _____

METHOD: Ultrasonic (Basic)

ACTIVITY TITLE: Calibrate Equipment

Applicable Procedures, Drawings and/or Reference Documents:

Element Number	ACTIVITIES	Action Code	Candidate Initials/ Date	Level I II & III Initials/ Date	TPE Level III Initials/ Date	COMMENTS / REMARKS
3.01	Verify Procedure for Use	P				
3.01	Determine required equipment based on applicable procedure for in-service or FAB/construction.	P				
3.01C	Verify equipment calibration stickers/certifications	P				
3.02B, 3.02C	Inspect equipment for wear/damage	P				
3.02	Assemble equipment	P				
3.03	Perform system checks	P				
3.04	Adjust instrument controls in accordance with procedure.	P				
3.04B	Determine required screen range and create a linear screen for each angle/or straight beam mode as applicable by procedure.	P				
3.06	Select calibration reflectors for each mode	P				
3.06C	Create a DAC for each mode	P				
3.06D	Establish a calibration check for each mode	P				
3.07	Create an electronic file.	P				
3.08	Document calibration on applicable forms	P				

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ULTRASONIC QUALIFICATION CARD GUIDANCE INSTRUCTIONS

CANDIDATE: _____ **ID:** _____

METHOD: Ultrasonic (Basic)

ACTIVITY TITLE: Pre-Examination Preparation

Applicable Procedures, Drawings and/or Reference Documents:

ELEMENT NO	ACTIVITIES	Action Code	Candidate Initials/ Date	Level I II & III Initials/ Date	TPE Level III Initials/ Date	COMMENTS / REMARKS
4.01A	Verify all elements, i.e. inspection equipment including paperwork is assembled ad ready.	P				
4.01B	Shield equipment	P				
4.01C	Verify required briefings have been completed	P				
4.02A	Conduct a survey of area for hazards	P				
	Verify weld/component identification	P				
4.02B	Ensure weld profile and surface condition meet requirements	P				
4.02C	Acquire temperature	P				
4.02D	Establish datum	P				
4.02D	Determine scan directions	P				
4.02E	Determine scan limitations and document	P				

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ULTRASONIC QUALIFICATION CARD GUIDANCE INSTRUCTIONS

CANDIDATE: _____ **ID:** _____

METHOD: Ultrasonic (Basic)

ACTIVITY TITLE: Perform Examination

Applicable Procedures, Drawings and/or Reference Documents:

ELEMENT NO	ACTIVITIES	Action Code	Candidate Initials/ Date	Level I II & III Initials/ Date	TPE Level III Initials/ Date	COMMENTS / REMARKS
4.03B	Recall Cal/data file	P				
4.03C	Perform calibration reference checks	P				
4.03D	Document results	P				
4.03E	Apply couplant	P				
4.03F	Determine scan start position	P				
4.03G	Adjust scan gain	P				
4.03I,4.03J	Scan component, maintaining scan speed , overlap and oscillation for each angle/mode	P				

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ULTRASONIC QUALIFICATION CARD GUIDANCE INSTRUCTIONS

CANDIDATE: _____ **ID:** _____

METHOD: Ultrasonic (Basic)

ACTIVITY TITLE: Record Indications/Document Examination

Applicable Procedures, Drawings and/or Reference Documents:

ELEMENT NO	ACTIVITIES	Action Code	Candidate Initials/ Date	Level I II & III Initials /Date	TPE Level III Initials/ Date	COMMENTS / REMARKS
5.02	Determine geometric versus non-geometric reflectors	P				
5.02A	Obtain W and L positions	P				
5.02B	Acquire a weld profile at area of indication (non-geometric)	P				
	Perform post calibration reference checks	P				
4.03N	Verify all required information has been obtained on field copies	P				
4.03N	Perform post examination cleanliness of inspection area	P				
5.04	Complete final calibration form	P				
5.04B	Complete examination form	P				
5.03	Perform plotting of recorded indications	P				
5.04C	Assemble data package	P				

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ULTRASONIC QUALIFICATION CARD GUIDANCE INSTRUCTIONS

CANDIDATE: _____ **ID:** _____

METHOD: Ultrasonic (Basic)

ACTIVITY TITLE: Record Indications/Document Examination

Applicable Procedures, Drawings and/or Reference Documents:

ELEMENT NO	ACTIVITIES	Action Code	Candidate Initials /Date	Level I II & III Initials /Date	TPE Level III Initials/ Date	COMMENTS / REMARKS
6.01	Determine if indication is geometric or non-geometric	P				
6.01A	Follow procedure for recording a geometric indication	P				
6.01B	Determine if additional surface conditioning is required for sizing techniques for non-geometric indication	P				
6.01B	Obtain through wall and length sizing	P				
6.01B	Determine if indication is ID connected	P				
6.03	Determine aspect ratio for a Section XI indication including linear interpolation if required	P				
6.04	Determine acceptability of indication	P				
6.05	Document results and submit for review	P				

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