

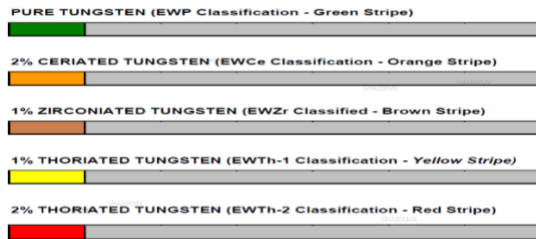
WELDING DOCUMENTS

1. What is the acceptance criteria of MPT for piping?
 - a. ASME B31.3 para# 344.3
2. What is the acceptance criteria of MPT for Pipeline?
 - a) ASME Section VIII appendix-6
3. What is the acceptance criteria of PT for piping and pipeline?
 - b) ASME Section VIII appendix-8
4. Which welding process electrode is non-consumable?
 - a. GTAW
5. **Welding qualification testing groove is in horizontal & pipe is in vertical position? What is the position?**
 - a. 2G
 - b. 3G
 - c. 5G
 - d. 1G
6. What is the difference between GTAW & GMAW?
 - a. GTAW: Wire feed is manual, non-consumable tungsten electrode is used.
 - b. GMAW: consumable electrode use & it is semi-automatic.
7. **What is the diameter of pipe when you welding external line-up clamp in pipeline?**
 - a. <16"
 - b. <12"
 - c. >16"
 - d. >10"
8. **Line up clamps :-**
 - a. An internal line up clamp shall be used if the pipe diameter is 16" inches **or** larger.
 - b. An external line up clamp may be used for pipe diameter is 16" inches **or** larger if approved by CSD welding engineer with a condition that 100 % RT is performed to the production welds.
 - c. Internal line up clamp shall not be removed before the completion of the root bead.
 - d. External clamps, the root bead must be at least 50% complete prior to removal.
9. Which gas is not using in purging?
 - a. Nitrogen
10. **Back Purging :-**
 - a) An inert backing gas shall be used for GTAW or GMAW root passes on single sided groove welds For ASME P. No 5 & above means alloy steel & stainless steel.
 - b) Nitrogen backing gas is prohibited for stainless steel.
 - c) Oxygen level for back purge For P5 below 1%
 - d) Oxygen level For P8 (Stainless steel & nickel alloy) below 0.05%
11. What is the acceptance criteria of undercut?
 - a. ≤ 1 mm ASME B31.3
12. **As a welding Inspector which documents required for inspection?**

- a. Approved welding procedure (WPS)
 - b. welding procedure approval Record ,
 - c. Approved welder's qualification Record.
 - d. All of the Above**
13. What is discontinuity?
- a. An interruption of the typical structure of a material, such as a lack of homogeneity in its mechanical, metallurgical or physical characteristics.
14. Acceptance criteria of RT for piping?
- a. ASME B31.3 Table 341.3.2
15. Acceptance criteria of RT for pipeline?
- a. API-1104
16. Why we are doing charpy impact testing?
- a. To check the toughness of the material/weld metal
- 17. What is the purging percentage required in Stainless steel?**
- a. <0.05%**
 - b. >0.05%
 - c. 5%
18. Why undercut are appear in welding?
- a. (High Travel Speed)
 - b. High welding amperage
 - c. Both A& B**
19. Why we are doing pre-heat?
- a. To slow down the cooling rate & To reduce the HI cracking
20. How to find the weld strength?
- a. By tensile test
21. Why tensile and bend test required for PQR?
- a. **Mechanical test**; is required to PQR qualification the PQR gives suitability of weld for required mechanical properties.
 - b. **Tensile test**; indicates the strength of weld.
 - c. **Bend test**; indicates the ductility of the weld.
- 22. What is the best method to find the surface defect in carbon steel?**
- a. PT**
 - b. MT
 - c. RT
 - d. UT
23. What is the best method to reduce the residual stresses except PWHT?
- a. Heat input maintaining & temper bead welding
24. What is the delay time between root pass & hot pass in cross country pipeline?
- a. 15 mins for vertical up & 5 mins for vertical down
25. Lamination in weld how can be find out?
- a. UT
26. Lamination in pipe bevel prepared area?
- a. LPT
27. Lamination in non-beveled area on surface?

- a. UT
- 28. PQR, WPS, WPQ explain abbreviation?**
- a. **Procedure qualification record, Welding procedure specification, Welder performance qualification.**
29. What is the relation between WPS & PQR?
- a. PQR is a supporting document of WPS which records the result of testing a test coupon
 - b. PQR is record of variables recorded during the welding of test coupon & to fulfill the required Mechanical properties
 - c. It is a written document which provides the direction to the person applying the material joining process
30. Nickel welding comparison with SS & CS?
- a. Coefficient of thermal expansion, weldability
 - b.
31. What is the design code for process piping?
- a. ASME B31.3
32. DCEP & DCEN in which the current is constant?
- a. DCEP, Constant current process SMAW & GTAW and Constant voltage process MIG/MAG, FCAW, SAW
33. Convex fillet weld calculation?
- Throat thickness (a) = 0.707 x leg length
Leg length (z) = 1.41 X Throat thickness
34. What is the difference between MIG & MAG welding?
- MIG: Metal inert gas welding, the shielding gas is used either argon, helium or a mix of both or a combination with oxygen.
MAG: Metal active gas welding, the shielding gas is used carbon dioxide instead of inert gas
35. SMAW essential variable other than GTAW?
- a. t pass > 13mm
36. 2G welding position?
- a. Groove horizontal & pipe in vertical position
- 37. Shielding helps to prevent oxidation?**
- a. True
 - b. False**
- 38. Purging helps to molten weld pool?**
- a. True
 - b. False**
39. Strength increases ductility?
- a. Decreases
40. Plant piping welding defect unacceptable?
- a. Cracks
41. Pre-heating is always required?
- a. Below 10C & moisture or as per B31.3 table-330.1.1
42. Which dia of low hydrogen electrode not used in all position?
- a. 5mm
43. TIG welding which conditions are wrong?

- a. DCEP
- 44. Welder qualified for 14mm thickness how much he be qualified?
 - ASME SEC 9 max to be qualified
 - API-1104 4.8 to 19.1mm
- 45. PT stands for?
 - a. Penetrant test
- 46. ASME SEC 8 code for?
 - a. Pressure vessel
- 47. Green strips in tungsten stands for?
 - a. Pure tungsten



- 48. MIG/MAG welding have what power source?
 - a. Constant Voltage, DCEP Polarity used
- 49. **AWS inspector can inspect which method?**
 - a. **Visual**
 - b. RT
 - c. PT
 - d. UT
- 50. What defect can be found if used damp electrode?
 - a. Porosity
- 51. What is the primary element for weld symbols?
 - a. Reference line
- 52. The Purpose of Back Purging in Stainless steel?**
 - a. **Prevent oxidation from the Root**
 - b. Slow Down the welding Temperature.
 - c. Prevent the Weld Decay
- 53. Major difference between MIG/MAG & SMAW welding in nickel steel?
 - a. MIG/MAG: Semi-automatic or automatic, wire feed is automatic and active or inert gas is used, constant voltage.
 - b. SMAW: Electrodes are used with no filler metal addition, Manual & constant current.
- 54. Corrosion resistance alloying element?
 - a. Cr
- 55. Alloying elements & effects**
 - a) **C**- Carbon for strength
 - b) **Mn** – Magnese for toughness
 - c) **S** – Silicon for < 0.3% deoxidizer
 - d) **Al** – Aluminium for Grain refiner

- e) **Cr**- Chromium for corrosion resistance
 - f) **Ni** – Nickel for Low temperature application
 - g) **Mo** – Molybdenum 1% creep resistance
 - h) **V**- Vanadium for Strength
 - i) **S**-Sulphur for residual element
 - j) **Titanium** for grain refiner
 - k) **Nb**- Niobium for grain refiner
 - l) **Cu**- Copper for weathering steel
- 56. CEV (Carbon equivalent value) in steel**
- a. CEV value must not exceed 0.45.
57. Purpose of shielding gas?
- a. Stabilized the arc and prevent exposure of the molten weld pool to oxygen, nitrogen and hydrogen contained in the air.
58. F-no is classified based on what?
- a. Usability characteristics, Based on covering, mechanical properties & compatibility with the material to be weld.
59. What are the types of electrodes?
- a. Rutile, Cellulosic, Basic
60. If a welder is qualified in 3G position which position he can be qualified?
- a. F,V for groove, F,H,V for fillet weld
61. A welder qualification is revoked if he?
- a. Fails to passes the initial production joints
 - b. He didn't perform welding within 6 month
 - c. **Both A & B**
62. In a SMAW electrode what is the 2nd digit denotes?
- a. Position
63. What are the components of HI?
- a. $V \times AX60$ /travel speed
64. If an essential variable changes a WPS shall be?
- a. Requalified
- 65. Which defects cannot be found in RT?**
- a. **Lamination**
 - b. Undercut
 - c. Lack of side wall fusion
 - d. Porosity
66. What is the main difference between the welding processes GTAW/SMAW?
- a. GTAW: Non-consumable tungsten electrode is used with filler metal addition and shielding gas is used from the cylinder
 - b. SMAW: Electrodes are used, no shielding gas is used
67. If a discontinuity is found in NDE under the acceptance limit it shall be?
- a. Accepted
68. Who is responsible for welder qualification?
- a. Organization

69. What is tensile strength?
- The resistance of material to breaking under tension
70. During qualification of a WPS, tension test is performed, what is the minimum acceptable rupture stress if a specimen breaks in the base metal?
- 95%
71. What type of power sources characteristics is required for autogenous welding?
- DCEN Straight polarity
72. How you will have recognized the basic electrode?
- AWS classification
73. 7018 electrode classification would be relevant to?
- AWS A5.1
74. Which of the following flame type to be used for the cutting of mild steel?
- Oxidizing flame
75. Groove weld diameter limits?
- Essential for welder qualification.
76. Pre-heating temperature?
- Table 330.1.1 of ASME B31.3
- 77. Capillary action plays a role in which NDE method?**
- PT**
 - RT
 - MT
 - ET
78. What is inter-pass temperature?
- Temperature maintain between the runs For SS 177 C and CS 315C Max
79. International standard for welding for pipelines?
- API-1104
80. International standard for the structural steel welding code?
- ASME D 1.1
81. As per the ASME B31.3 cracks to be found in the RT report what you will do?
- Accept/
 - Reject**
82. High heat input observe in which welding position?
- Vertical up.
83. What is the size for welder performance test coupon?
- 6 inch (150mm) length
84. MT test is good for which type of defect?
- Surface and subsurface up to 2mm.
85. Electrode classification E7018 is what type?
- Basic
86. Distance between two parallel welds is?
- 20mm or 3 time thickness whichever is greater
87. RT device that can measure the sensitivity?
- Penetrometer (IQI)
88. UT angle beam good for root defect?

- a. 60 or 70 angle
- 89. Essential variables for SMAW process?
 - a. P number, F number, PWHT, Joint Design, Pre heat, thickness, Dia
- 90. Electrode can be identified by?
 - a. Color code and AWS classes and manufacturing stencil
- 91. SS metals cool down rapidly it will produce?
 - a. Martensitic
- 92. PT test more cleanly with or without grinding?
 - a. Without grinding
- 93. Electrode good for root penetration?
 - a. 6010 cellulosic
- 94. Small change in current makes big change in voltage?
 - a. Constant current power source
- 1. Longitudinal side bend good for which defect?
 - a. Lack of fusion for root defects.
- 1. FCAW second digit in E70-t xx?
 - a. Is mean weld position
- 2. **Which of the following is not an arc welding process?**
 - a. **ESW**
 - b. SMAW
 - c. FCAW
 - d. SAW
- 3. Code for manufacturing storage tank?
 - a. API 650
- 4. **Which NDT method is used to verify the Surface Lamellar tearing Defect?**
 - a. **UT**
 - b. ET
 - c. RT
 - d. MT
- 5. Repair can be repeated how many times?
 - a. Twice
- 6. Factor help to make porosity?
 - a. Wind, wet electrode, moisture
- 7. **WPS is written documents include?**
 - a. Essential variable
 - b. Non-essential variable
 - c. supplementary essential
 - d. **All of the above**
- 8. During welding what is inspector responsibilities?
 - a. Verify current, voltage, inter pas temperature and inter pas cleaning e.c.t.
- 9. **Is there any weld joint can accept by VT only?**
 - a) **Yes**
- 10. Weld joint how can be identified?
 - b) By weld matrix,

11. Increase carbon content?
 - a. Decrease ductility, increase hardness.
12. Baking temperature **A5.1**?
 - a. 260-430°C (2 hours minimum).
13. Baking temperature **A5.5**?
 - a. 370–430°C (2 hours minimum).
14. Holding temperature?
 - a. 120°C minimum.
15. **Which NDT Method is apply for SS material surface defects?**
 - a. **DPT**
 - b. MT
 - c. RT
 - d. UT
16. Welding equipment calibration duration?
 - a. 1 Year
17. Hardness area?
 - a. Base metal, Heat affected zoon & weld metal.
18. What are bevel angles type?
 - a. Single bevel, double bevel, u type, J type.
19. Welder qualified in 5G position, which position he can weld?
 - a. F, V, O or (1G/5G)
20. How happening slag inclusion?
 - a. Improper inter-pas cleaning
21. PT cannot carried out at temperature range 5C° to 52C° in a specific joint, what the next step for that?
 - a. Procedure to be qualified.
22. **Cross country pipeline heat input should not exceed?**
 - a. 1.4kj/mm
 - b. 1.5 kj/mm
 - c. **0.8 kj/mm**
 - d. 1.8 kj/mm
23. Which gas used for purging?
 - a. Hi, Ar
24. Root bend test done and crack happened root area which is
 - a. Rejected
25. **An elbow joint cut out which test you will conduct before fit-up on bevel area?**
 - a. **PT**
 - b. UT
 - c. RT
 - d. MT
26. Which is least visible penetrant?
 - a) **UV fluorescent**
27. **Galvanized pipe not welding because?**
 - a) It is weaker then thread joint

- b) Internal defects while welding
 - c) Galvanized paint will be damage due to welding heat**
 - d) All of above
28. Which dia onward needs two welders?
- a. >16"
29. While welding on root area if current is too high which crack will occur?
- a) Burn through.
30. **Which defect is not find out in RT?**
- a) Lamination**
 - b) Undercut
 - c) Crack
 - d) slag
31. if a false indication comes on radiography film it is rejected?
- a) Always
 - b) Not always**
32. Ductility relates to?
- a) Percentage of elongation
 - b) Reduction of cross-action area
 - c) A & B**
33. When we can remove the internal clamps while pipe line welding?
- a) After root completion
34. Welder qualified on 6", what is minimum dia he can weld?
- a. 2 7/8
35. Heating and cooling with furnace for material soft
- a. Annealing
 - b. Normalizing**
 - c. Tempering
 - d. Quenching
36. Groove slope surface against welding for what
- a. Groove face
 - b. Groove angle
 - c. Bevel angle**
37. Work piece is +tv, electrode is -tv in DC current the polarity?
- a. Straight**
 - b. Reverse
38. **Cross country pipeline the welding procedure qualification code?**
- a. B31.4
 - b. B31.8
 - c. API-1104**
 - d. ASME section VIII
39. Pipe line misalignment acceptable limit?
- b) 1.6mm piping, 3mm for pipe line.
40. A welded joint has hoop stress of 20% in B31.8, what is acceptance code?
- a. B31.8

- b. API-1104**
 - c. AWS D1.1
- 41. E6010 how much time required for drying?
 - a. 2 hours
 - b. 4 hours
 - c. Not required**
- 42. STRA test is performing for what
 - a. Tensile strength
 - b. Ductility
 - c. Toughness Through thickness Z direction**
- 43. In FCAW process how can you protect the Arc during windy climate?
 - a. Shielding gas
 - b. Flux in filler wire
 - c. Wind shield usage
 - d. All of above**
- 44. Due to what crater pipe occur?
 - a. High voltage
 - b. Technique**
 - c. Filler type
 - d. Base metal properties
- 45. Welding machines calibration standard?
 - a. SAES-M-100
 - b. BS 7570**
- 46. When change non-essential variables, what will you do for the particular WPS to use at site?
 - a. Re-write & revise the WPS and after approval use the same at site.**
 - b. Use a WPS with that changed essential variables at site
- 47. Laminar cracks occur due to?
 - a. High restrained configuration joint**
 - b. High hardness
- 48. Essential variable for SMAW welder qualification
 - a. Addition of backing
 - b. Change in 4G to 1G position
 - c. Change from vertical up to vertical down**
 - d. None of above
- 49. When doing root welding of joint where backside welding is not possible which welding process is ideal?
 - a. GTAW Process
- 50. When you find a welding repair in the welding whom should you report for rectification?
 - a. Construction Team
- 51. What mechanical test qualifies the welder?
 - a. Bend test required
- 52. What type of inspection required during incoming consumable inspection.
 - a. MTC documents review as per PO and Physically consumable condition verified.

53. Buttering: - Buttering or weld build up on the prepared surface shall not exceed the lesser of 1/3rd of the base metal thickness or 10mm. Without the approval of CSD.
54. **How nickel alloy material welding is difference from carbon steel and stainless steel?**
- Chemical composition and mechanical properties
 -
55. What is the distance and how will you calculate from source to film distance?
- $d = UGF/D$
56. Which one is false indication in Radiography?
- film mark
57. What type of flux used in SAW process?
- Agglomerated Flux used in SAW process
58. What is the requirements of copper& nickel alloy consumable?
-
59. NDE used to measured volumetric defect in which process?
- RT
60. If you review the radiography film the defect is in the acceptance level but it is rejected?
- linear indication like cracks
61. If you find welder is used wrong technique what is your first action?
- NCR issued
62. How you will prepare the test specimen on weld overlay?
- (QW-382)
63. Dissimilar thickness but weld is pre heat temperature to follow?
- Transition temperature.
 - Lower thickness
 - High thickness**
64. In ASME section IX current edition in SMAW how many essential variables?
- 8
 - 9**
 - 10
65. Pre heat
- Wide HAZ zone
 - Required toughness can be achieved
 - Weldability increase**
 - All of above
66. When metal temperature up to 920C° and furnace cooling maintains to be.
- Lower toughness value**
 - Higher toughness value
 - Intermediate toughness value
 - No toughness.
67. Which are the basic electrodes
- 7018, 7016, 6018, 7024
 - 7018, 6013, 7018M, 6011
 - 7015, 7016, 7018, 7028**
 - 6018, 7018, 7024, 7028

68. PWHT is to be
- a) To prevent from solidification cracking
 - b) Prevent HICC cracking
 - c) Improve mechanical properties**
 - d) All of above
69. Code of practice for visual inspection should include
- a) Before during and after**
 - b) During and after
 - c) Any time
 - d) Before NDT
70. Leak test, what method used?
- a) Penetrant test.
 - b) Vacuum box test**
 - c) Kerosene oil test
71. What SFA specification for 8018 electrode?
- a) A5.5**
72. For radiography of a pipe, source inside the pipe and film outside single wall exposure, and single wall viewing
- b) Panoramic shot**
73. Why 6010 electrode in root and type of electrode?
- a) Good penetration and cellulosic**
74. Essential variables for welder in SMAW process?
- a) Change in vertical position**
75. High frequency sound wave transmitted into metal at an angle, what is test method?
- a) UT**
- 76. What grade of material we will use at high temp. Service (above 400 degree) from the following**
- a. A 333
 - b. A 335**
 - c. A 516
 - d. A 240
- 77. Which type of defect we will get from a side bend test**
- a. Porosity,
 - b. Slag,
 - c. Lack of side wall fusion,**
 - d. Crack
78. For SMAW welding which will be the welder essential variable
- a) Addition of backing,
 - b) Polarity,
 - c) 4G TO 1G ,
 - d) Progression**
 - e) Transfer Mode

79. From the following what are the three conditions which will promote H₂ crack or delayed crack
- a) **Damped or wet electrode, ii. Not Proper shielding, air contamination, iii. Not proper preheat**
80. The maximum allowable SMAW low hydrogen electrode size except 1G/1F position.
- a) **4mm,**
 - b) b) 5mm,
 - c) c) 3.2mm,
 - d) d) 2mm
81. WPS Contains
- a) Electrode classification,
 - b) Base metal,
 - c) Deposit Thickness,
 - d) **All the above**
82. An arc welding power source with a volt-ampere relationship yielding a large welding current change from a small voltage change.
- a) **Constant voltage power supply,**
 - b) Constant current power supply,
 - c) Alternating current power supply,
 - d) None of these
83. A discontinuity that caused due to Nonmetallic particle solidify on the weld surface or entrapped between the passes
- a) **Slag,**
 - b) Porosity,
 - c) Tungsten Inclusion,
 - d) under cut
84. A discontinuity resulting from an arc, consisting of any localized re-melted metal, heat-affected metal, or change in the surface profile of any metal object.
- a) Slag,
 - b) Porosity,
 - c) **Arc strike,**
 - d) Arc Blow
85. F number grouping of electrodes and fillers based on what
- a) Chemical analysis,
 - a) **Usability characteristics,**
 - b) Chemical analysis,
 - c) Mechanical Properties
86. Which instrument we will use to find out the miss-alignment in pipe welding
- b) **HI-LO gauge,**
 - c) Steel rule,
 - d) Right angle,
 - e) Vernier caliper
87. Which electrode we will use to weld 9CR 1Mol material
- a) E8018 B3L
 - b) E8018 B6L

- c) **E8018 B8L**
 - d) E7018 B2L
1. From the following which is a type of electrode
 - a) Rutile,
 - b) Basic,
 - c) Cellulose,
 - d) **All of the above**
 2. In MPT we can detect defects at
 - a) a) Sub surface only,
 - b) b) Surface only,
 - c) c) Root only,
 - d) **d) Shallow surface and surface**
 3. From the following which is the major type of defect in pipe weld
 - a) Sub surface defect
 - b) Surface defect
 - c) porosity or crack
 - d) **All the above**
 4. Terminology of slant surfaces in which welder will deposit the weld metal
 - a) Root gap
 - b) Root face
 - c) **Bevel angle**
 - d) Groove angle
 5. **What you will measure to determine the size of a convex fillet weld**
 - a) **Theoretical throat**
 - b) From capping height
 - c) Leg size
 - d) None of these
 6. Difference between GMAW and GTAW
 - a. One of them uses both ac and dc other one only dc
 - b. Both of them using non consumable electrode other one not
 - c. **Usually one of them termed as Manual other one Semi auto**
 - d. One using shielding gas other one not
 7. During inspection, before welding what you will check generally about welding machine
 - a) Current and voltage
 - b) General assembly
 - c) **Calibration sticker and date**
 - d) Non-of these
 8. **In pipeline welding welder welding with a wrong electrode and as an inspector what will be your action**
 - a) Stop work because it is a violation
 - b) No
 - c) **Investigate and inform to supervisor and higher authorities**
 - d) Revoke welder
 9. Welders has to be retested for a process when
 - a) They have no qualification in a process
 - b) For last 9 months they didn't weld in a process
 - c) For last 12 months they didn't weld in a process
 - d) **Their ability to make a sound weld is in doubt**

10. In a pipe or a vessel weld we are taking RT in a same method before and after PWHT. Why
- For traceability in future
 - Good Practice
 - Verified the crack and welding defect**
11. How we can avoid air contamination in a low hydrogen electrode
- keep inside a storage oven
 - Keep inside a portable quiver
 - always keep inside a hermetically sealed container
 - both "a" & "b"
 - all the above**
12. Normal operative temperature for penetrant testing is 5-52 degree and if the weldment is not satisfying the condition what will be your action
- New procedure to approve with demonstration.
13. What is the minimum required length to radiograph length for qualify a welder in 6" OD pipe of P5 material
- 6" length
 - entire pipe**
 - 8" length
 - none of these
14. Which inspection technique we will use to find lamination in a edge of pipe that is not beveled
- UT
 - PT**
 - MPT
 - VT
15. For finding defects in root area what type of angle probe will use
- 15°
 - 30°
 - 45°
 - 60°**
16. Welder welding with high heat input and crack will occur at which area
- Root area
 - Centre of weld
 - HAZ**
 - Anywhere in the weld

17. 1What is the difference between PSL1 and PSL2 Pipes?

These two basic specifications are in part recognized as different levels of physical and technical requirements.as well as mechanical properties and chemical composition is difference these material are used for pipe line for the corrosive and high temperature services.

| PSL1- | PSL2- |
|----------------------------------|-------------------------------|
| C =0.28 | C =0.24 |
| Strength Low | Strength limited |
| PWHT required for X42 and higher | PWHT required for All grades. |

| | |
|--|---|
| No additional mechanical testing required (Impact) | Additional mechanical testing required (Impact) |
|--|---|

18. What are the 3 main Mechanical Test required for procedure/performance qualification

- a) Radiography, Toughness, tensile test
- b) Toughness, tensile test ,MPI test
- c) **Bend Test, Tensile Test, Toughness Test**
- d) Visual Test, Bend Test, Macro Examination.

19. Which Element have more effect on the steel characteristics and Pre heat.

- a) Manganese
- b) copper
- c) chromium
- d) **carbon**

20. Best Method to find surface defect on carbon steel Material.

- a) **PT**
- b) MT
- c) RT
- d) VT

21. Charpy V- Notch test is performed on steel to verify.

- a) Hardness
- b) Tensile strength
- c) **Toughness**
- d) All of the above

22. What is the maximum temperature prior to start the next pass is called.

- a) Preheat temperature
- b) **interphases temperature**
- c) Maximum heat input
- d) Post heat temperature

23. What is the purpose of welding operator Qualification?

- a) Operator attitude verify
- b) **Qualified for to operate the welding machine for making sound weld**
- c) Welding Process requirements
- d) None of the above

24. How can verified the RT is physically performed on the joint.

- a) RT marking on the joint
- b) ISO number/joint detail verified from the Film
- c) Through Technian
- d) **Above A&B**

25. A statements WPS is a written qualified welding procedure prepared to provide

Direction for making production welds to Code requirements is written in which standard

- a) QB ASME IX
- b) ASME B31.3
- c) API 1104
- d) **QW ASME IX**