

CLAIMS

What is claimed is:

1. A method comprising:

applying a wire continuously to an oil and gas tubular using low heat input welding to create multiple bands.

2. The method of claim 1, further comprising:

cooling the oil and gas tubular in ambient air after welding.

3. The method of claim 1, wherein the low heat input welding uses a direct current electrode positive voltage of between 12 and 24 volts and an electric current of between 150 and 300 amperes.

4. The method of claim 3, wherein the low heat input welding uses a direct current electrode positive voltage of between 12 and 24 volts and an electric current of between 150 and 260 amperes.

5. The method of claim 3, wherein the low heat input welding uses a direct current electrode positive voltage of between 12 and 20 volts and an electric current of between 150 and 300 amperes.

6. The method of claim 1, wherein a surface of the oil and gas tubular is at a temperature of 150°F or less during the application of the wire.

7. The method of claim 1, wherein the wire is a hardbanding material.

8. The method of claim 1, wherein the wire is a buildup material.

9. The method of claim 1, wherein the tubular has an internal plastic coating.

10. The method of claim 1, wherein the hardness within a heat affected zone of the oil and gas tubular is greater than 20 HRC and less than 45 HRC after application of the wire.

11. The method of claim 1, wherein the oil and gas tubular is an upset connection, and further comprising:

grinding excess material from the applied weld material until the outer diameter of the upset connection conforms to a preselected outer diameter; and
recutting the upset connection.

12. The method of claim 1, wherein the oil and gas tubular is an upset connection with an initial external taper, and further comprising:

grinding excess material from the weld material applied to the initial external taper until the outer diameter of the upset connection conforms to a preselected outer diameter and a new external taper is formed parallel to the initial external taper.

13. The method of claim 1, further comprising:

preparing an outer surface of an oil and gas tubular, where the oil and gas tubular is one of: an upset connection, a slick connection, and a tube body;

14. The method of claim 13, wherein preparation of the outer surface of the oil and gas tubular comprises buffing the outer surface.

15. The method of claim 13, wherein preparation of the outer surface of the oil and gas tubular comprises forming a recess in the outer surface by at least one of: grinding and machining.

16. The method of claim 1, further comprising:

heating an outer surface of the oil and gas tubular to a temperature of 150°F or less prior to applying the wire.

17. The method of claim 1, further comprising:

applying weld material to an oil and gas tubular while the temperature of the to-be-welded surface is between -50°F and 150°F.

18. The method of claim 1, further comprising:

applying weld material to an oil and gas tubular while the temperature of the to-be-welded surface is between 0°F and 120°F.

19. The method of claim 1, further comprising:

applying weld material to an oil and gas tubular while the temperature of the to-be-welded surface is between 32°F and 100°F.

20. The method of claim 1, further comprising:

applying weld material to an oil and gas tubular while the ambient cooling temperature is between -50°F and 150°F.

21. The method of claim 1, further comprising:

applying weld material to an oil and gas tubular while the ambient cooling temperature is between 0°F and 120°F.

22. The method of claim 1, further comprising:

applying weld material to an oil and gas tubular while the ambient cooling temperature is between 32°F and 100°F.

23. An oil and gas tubular constructed by a process comprising the steps of:

applying a wire continuously to an oil and gas tubular using low heat input welding to create multiple bands.