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(54) Title of the Invention: **Bi-layer iron coating of lightweight metallic substrate**  
Abstract Title: **Bi-layer iron coating of lightweight metallic substrate**

(57) A wear resistant friction coating (WRFC) can be applied on a lightweight metallic substrate, by applying a cold gas dynamic spray bond coat containing more iron than any other single element directly onto a surface of the substrate, and thermal spraying the WRFC coating over the bond coat to a thickness of at least 500 µm. Corrosion resistance, adhesion, thermal cycling resistance, and wear resistance have been demonstrated.

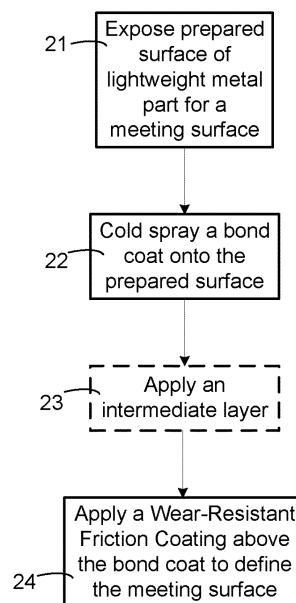


FIG. 2