

“Lean Atmosphere – Co2 Emission Reduction”

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Abstract –

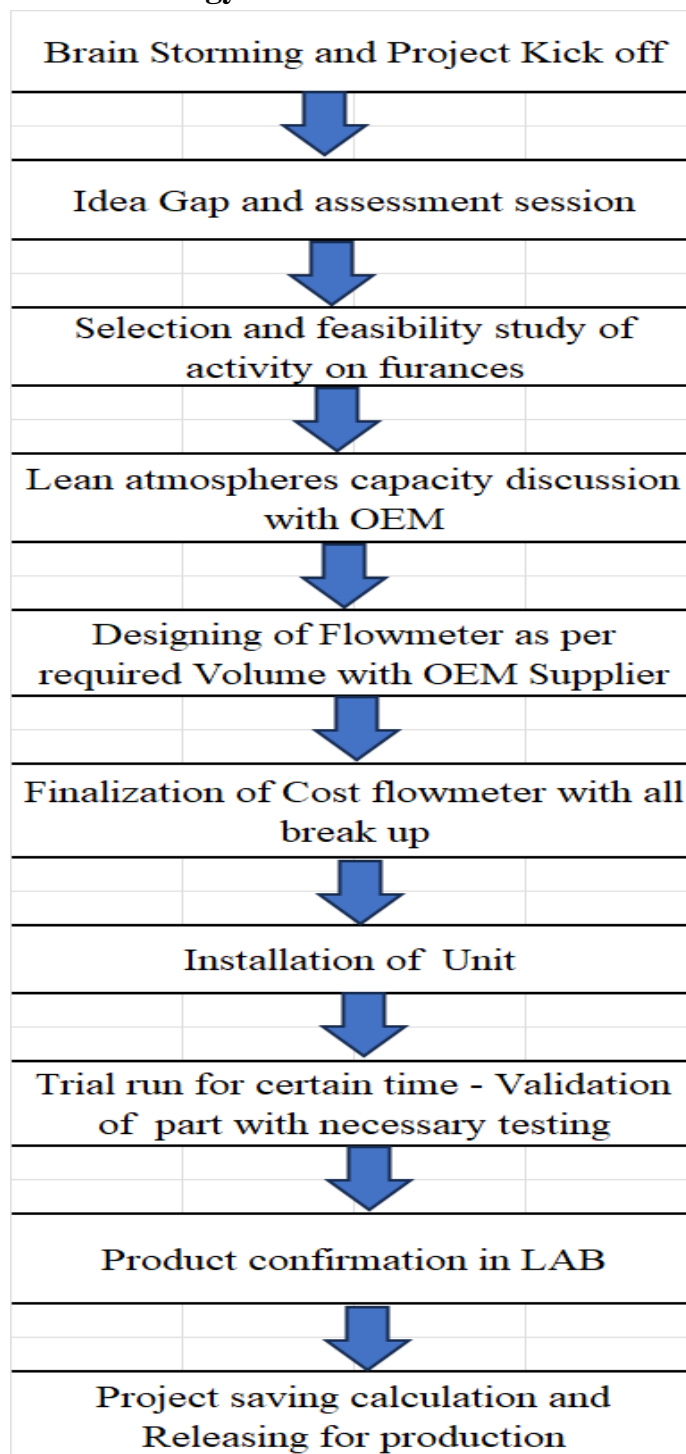
To Maintain the Environmental conditions most of industries started a Green Initiatives to contribute to reduce the carbon footprint. Neutral Hardening (Quenching Tempering) is hardening process which achieve a good, needed surface and core hardness specification adjusting furnace atmosphere's carbon potential the same as heat-treated ferrous material's carbon concentration. Nitrogen and LPG one basic atmosphere we are using to do the Heattreatment of Bearing inner rings and Outer rings components to achieve the desired properties. To maintain the surface carbon of the component and burning the air inside the furance atmosphere Minor amount of LPG (Liquid petroleum Gas) need to introduce into the furance and using of this gas leads to CO₂Emission. After Modified Nitrogen flowmeter design with std OEM supplier helps to achieve the results of Carbon CO₂ emission reduction. Also, we have validated the product Quality parameters for surface caron Microstructure analysis.

Key Words: Green Initiatives, carbon footprint, Neutral Hardening, Nitrogen, LPG, Surface caron

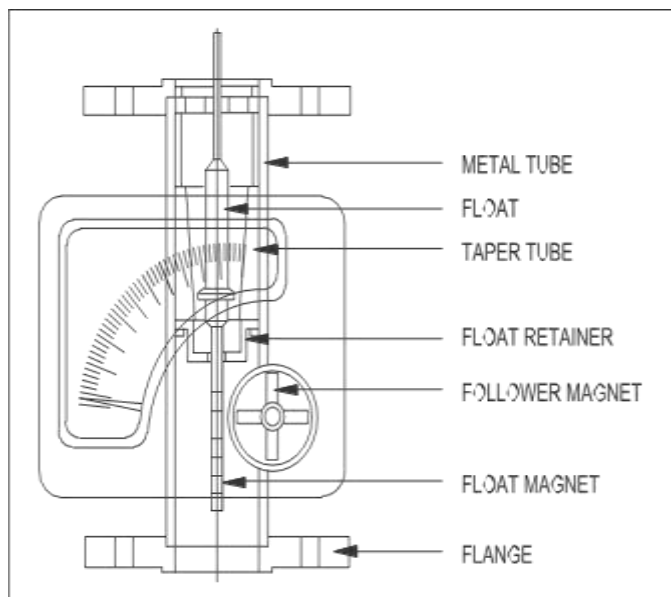
1.INTRODUCTION

Carbon dioxide (CO₂) emissions have several negative impacts on the planet, including Global warming: CO₂ is a greenhouse gas that traps heat from the sun and Earth's surface, causing the planet to warm. This warming is happening faster than at any other time in history. Ocean acidification: CO₂ dissolves into the ocean, reacting with water to create carbonic acid and lower the ocean's ph. Extreme weather: Rising temperatures are changing weather patterns, leading to more frequent and intense storms. Sea level rise: Rising temperatures are causing sea levels to rise. Species extinction: Rising temperatures are causing mass species extinction. Food scarcity: Rising temperatures are leading to food scarcity. Economic inequality: Rising temperatures are leading to greater economic inequality.

2. Methodology



3. Design



3. CONCLUSIONS

For CO₂ Emission reduction by using only neutral atmosphere (without LPG) in the furnace which results to improve the life of the furnace and support energy saving by continuous running of the furnace without breakdown. Product Quality level improved and sustained. Product specifications meet as per customer requirement. Using Direct LPG gets saved. Indirect contribution towards net zero to improve the carbon footprint.

4. ACKNOWLEDGEMENT

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