

G. Vijayaragavan

Add:450/c, Ambedkar nagar, pudupet, Attur, Salem Tamilnadu.

Mobile :+91-9167851012

Email :vragav88@gmail.com



Examination	University	Institute	Year	CPI / %
<i>Post-Graduation:</i> Materials Science	IIT Bombay	IIT Bombay	2015	8.73
<i>Under-Graduation:</i> Metallurgical engineering	Anna University	Government College Of Engineering- Salem	2010	76.00
Intermediate/+2	H.S.C - Tamilnadu State Board	Sri Saradha Memorial Matric Higher Secondary School-Attur	2006	77.33
Matriculation	S.S.L.C-Tamilnadu State Board	Government Boys Higher Secondary School-Attur	2004	84.60

CURRENT PROFESSIONAL WORK EXPERIENCE

[November'17-Present]

Company	Advanced Research centre for powder metallurgy and new materials (ARCI)
Department	Centre for Automotive Energy Materials (CAEM)
Position	Project Junior Scientist
Projects	Microstructure property correlation of high performance hard magnetic materials [Sm-Fe-N and Nd-Fe-B]

PROFESSIONAL WORK EXPERIENCE

[December'16-November'17]

Company	Indo-Mim Technology Private Limited, Bangalore.
Department	Research & Development (R&D)
Position	Engineer
Responsibility	<p>Metallurgical testing:</p> <ul style="list-style-type: none">➤ Handling and Having Fine skill on Hardness tester (Rockwell, Vickers & Micro) and also operating UTM for knowing the sample's yield strength, tensile strength and elongation. <p>Metallurgical Microscope:</p> <ul style="list-style-type: none">➤ Handling and having strong knowledge on microstructural analysis of all types of stainless steels, super alloys (Mainly Ni-Based) and Titanium alloys (Mainly Ti-6%Al-4%V).➤ Apart from Microstructural analysis, also handling porosity analysis and its size measurement, Phase study (ferrite, pearlite, retained austenite and martensite) and carbides analysis in Powder Metallurgy part using MIM Technique. <p>Heat treatment of steels:</p> <ul style="list-style-type: none">➤ To enhance the mechanical properties of MIM part, process like Solutionizing, Sub-Zero treatment and aging [artificial] and some other is used. <p>Failure analysis of MIM part:</p> <ul style="list-style-type: none">➤ Handling the failure analysis of materials like stainless steels, super alloys and titanium alloys of various applications like Medical, Aerospace and Automotive.➤ Using and having good knowledge on characterization techniques like Optical microscope, Scanning electron microscope (SEM) and Energy dispersive X-Ray spectroscopy (EDX) and X-Ray diffraction (XRD). <p>Customer complaint:</p> <ul style="list-style-type: none">➤ An expression of dissatisfaction made to an organization's products or services by

	<p>customer is considered as top priority to solve the same to keep better relation with every valuable customer ever.</p> <p>Process enhancement:</p> <ul style="list-style-type: none"> ➤ Many modifications is being done in different areas like compounding ,molding, de-binding and sintering to improve the quality and quantity of MIM part.
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PROFESSIONAL WORK EXPERIENCE	<i>[June'10-July'13]</i>
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Company	Essar steel India private limited,Hazira-Gujarat.
Department & Area	Steel making plant (SMP)& DC-Electric arc furnace
Position & Experience	Deputy manager& 3 years
Job profile & Responsibility	<ul style="list-style-type: none"> • Melting of HBI, Scrap and Hot DRI and controlling the entire process to get a liquid steel of exact composition and temperature. • Inspection of furnace refractory condition and planning of repair jobs accordingly to avoid major breakdowns. • Coordination with ladle furnace andcaster for100% plant utilization. • Coordination with scrap yard engineer for timely charging of Scrap and hot DRI. • Listing of jobs to be done during shutdown and effective planning to restore the furnace as earliest.
Key projects	<p>Analyzed Nitrogen Control in DC-Electric Arc Furnace for Denitrogenation.</p> <ul style="list-style-type: none"> ▪ Reduced the diversion of special grades. ▪ Controlled the final nitrogen ppm from electric arc furnace to ladle furnace. ▪ Observed the improvement in quality of final products. <ul style="list-style-type: none"> • Maximized the DRI into the Furnace by Modifying DRI hose line with the help of Mechanical Engineers. <ul style="list-style-type: none"> ▪ Reduced Cost of steel per ton. ▪ Reduced Tap-Tap time. ▪ Observed improvement on yield
Initiatives	<ul style="list-style-type: none"> • Idea given to increase the Hot DRI to improve yield and to reduce the Power Consumption. • Minimized the Electrode Breakage in furnace operation by self involvement with technician of furnace electrode maker.
Achievements	<ul style="list-style-type: none"> • Nominated for “Employee of the month”. • Made 10-heats continuously for 3 days in night-shift [highest production-4500 ton]. • Zero electrode breakage and zero break down in 3 year of experience in SMP. • Hot Metal maximization done for yield improvement and to reduce the power consumption.

ACADEMIC PROJECTS

<p>M.TECH PROJECT: (Guide: Prof.D.Bahadur)</p> <p>ZnO Nanostructures for efficient dye degradation under UV and solar light</p>	<i>[June'14 -Present]</i>
<p>B.TECH PROJECT: (Guide: Prof.D.Noorullah)</p> <p>Studies on mold properties of sand using alkyl oil urethane process for metal casting.</p>	<i>[Jan'10-Apr'10]</i>
<p>M.TECH SEMINAR: (Guide: Prof.S.Parida)</p> <p>Nitrogen Control in Electric Arc Furnace for Denitrogenation.</p>	<i>[Jan'14-Apr'14]</i>
<p>PROJECT AT SAIL: (Guide: T.Muthukumar, Salem steel plant)</p> <p>Determination of softening temperature of Ferritic Stainless Steels (AISI 430) by Annealing in Metallurgical Service Department with one of my batch mates at Salem steel plant by our self-interest.</p>	<i>[Jun'09-Aug'09]</i>