Pure Form Carbon LLP

presents

RUDRA – TECHNOLOGY

Fuelling Life…

ESSENCE

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AT A GLANCE Pure Form Carbon LLP – COMPANY PROFILE

Introducing Pure Form Carbon - the marketing arm of Pure Form Carbon LLP (India), serving the entire European and UK region. Our focus is on promoting renewable fuels and clean energy solutions that are both environmentally friendly and socio-economically viable.

At Pure Form Carbon, our mission is to make a positive impact on the environment. We are dedicated to conducting research and developing practical solutions in the field of renewable fuels, with the aim of reducing greenhouse gas emissions.

Mahesh Pagnis, is the Chief Chemist for Pure Form Carbon. With over 20 years of extensive experience in the chemicals and fuels industry, Mahesh's expertise has been instrumental in shaping our vision for a sustainable future.

With our specialised knowledge and a remarkable 9-year track record in designing and manufacturing pyrolysis plants, we have acquired invaluable expertise. This experience has empowered us to pioneer an innovative solution that produces Turquoise Hydrogen, the fuel of the future that will help preserve our planet.

As the UK division of Pagnism Innovations, we extend our reach to serve the entire European & UK region. We are committed to spreading awareness about our cutting-edge technologies and solutions, and we aim to collaborate with partners and stakeholders across Europe to foster a cleaner and more sustainable world.

Join us at Pure Form Carbon as we lead the way towards a greener future. Under the guidance of Mahesh Pagnis, our Chief Chemist, we can collectively create a world that thrives on renewable fuels and clean energy, benefiting both the environment and society as a whole throughout Europe.

Pure Form Carbon
PRODUCTS & SERVICES

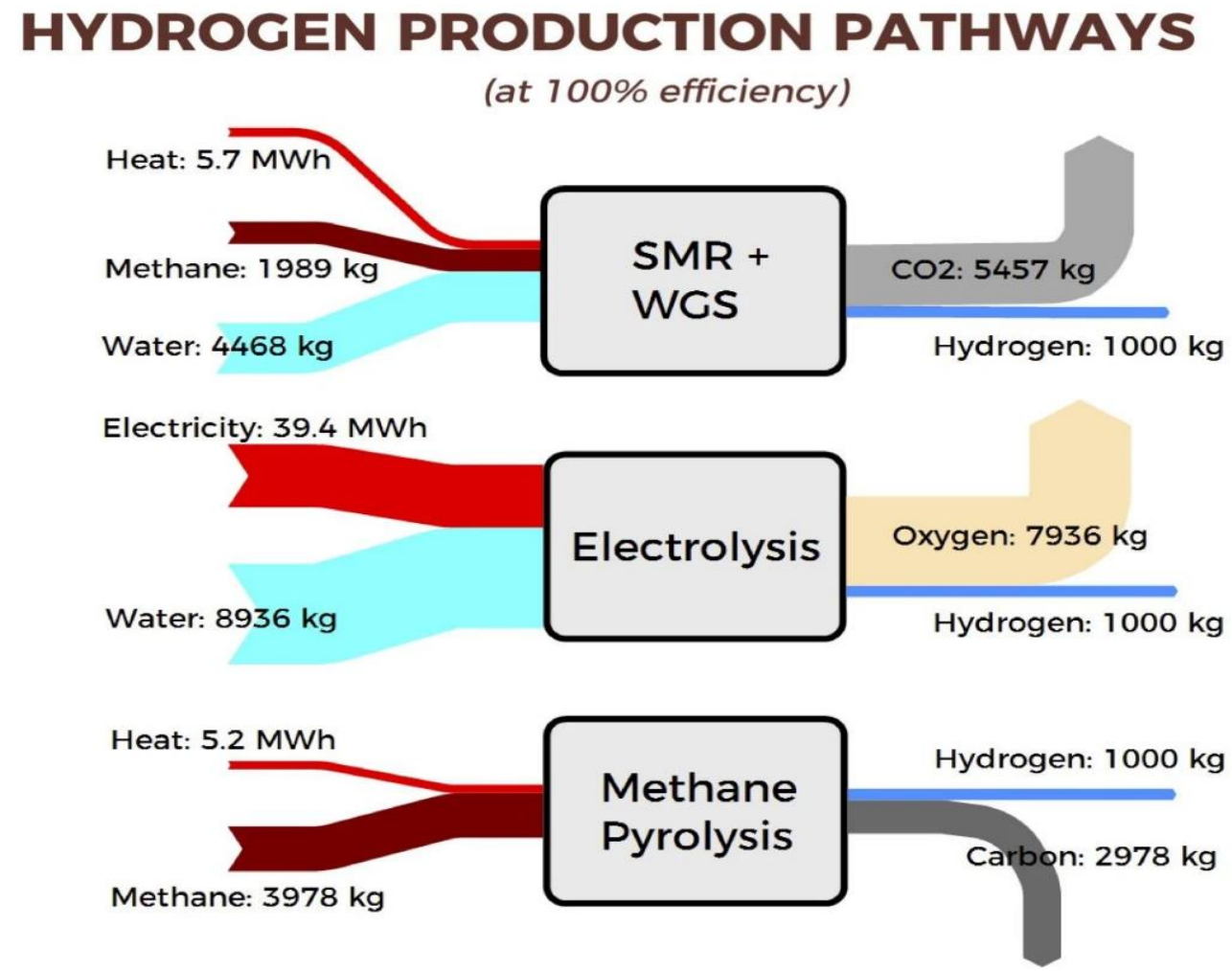
Pure Form Carbon LLP Pvt Ltd boasts a proud record of accomplishments. As for Pure Form Carbon, we are thrilled to announce our recent establishment as the sole agents for the entirety of Europe & UK.

Under the Pagnism Innovations umbrella, we are excited to bring our cutting-edge solutions to the European market, focusing on renewable fuels and clean energy. Our aim is to provide sustainable and innovative products and services that align with the unique requirements of our European clients.

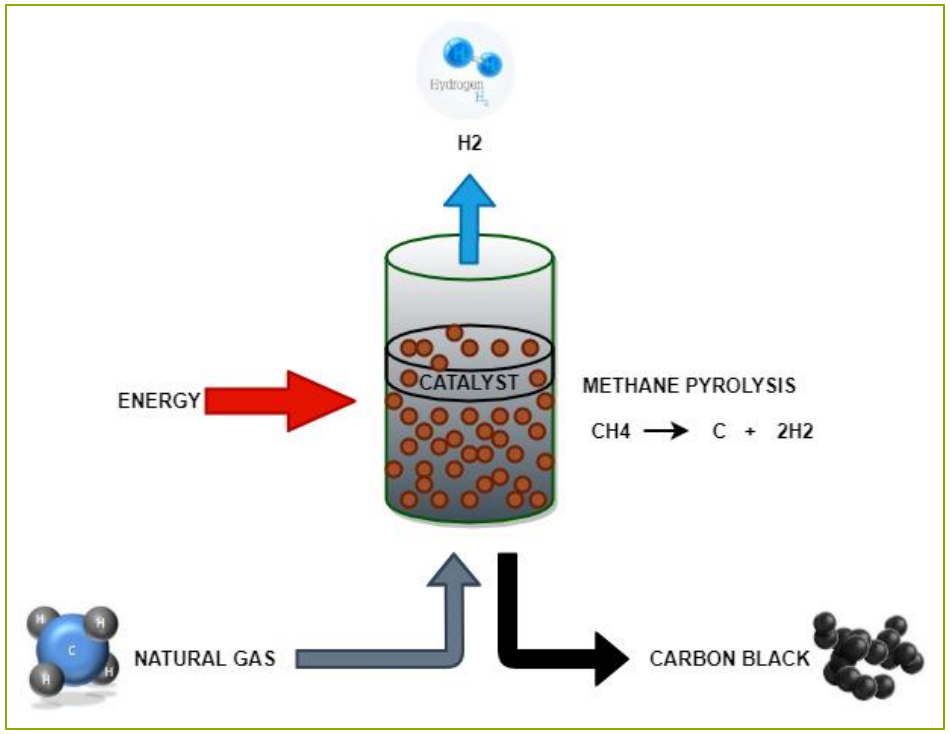
With a strong foundation and the support of PIPL, Pure Form Carbon LLP is poised to make a significant impact on the European renewable energy sector. We are dedicated to forging strategic partnerships, expanding our network, and delivering top-notch solutions that contribute to a greener and more sustainable future for Europe.

As we embark on this exciting journey, we invite businesses and organizations across Europe to join us in our mission to drive positive change and embrace the benefits of renewable fuels and clean energy. Together, let's pave the way for a brighter and more sustainable future throughout Europe.

H2 - TYPES


HYDROGEN PRODUCTION PATHWAYS
(at 100% efficiency)
Heat: 5.7 MWh
Methane: 1989 kg
Water: 4468 kg
SMR + WGS
CO2: 5457 kg
Hydrogen: 1000 kg
Electricity: 39.4 MWh
Water: 8936 kg
Electrolysis
Oxygen: 7936 kg
Hydrogen: 1000 kg
Heat: 5.2 MWh
Methane: 3978 kg
Methane Pyrolysis
Hydrogen: 1000 kg
Carbon: 2978 kg

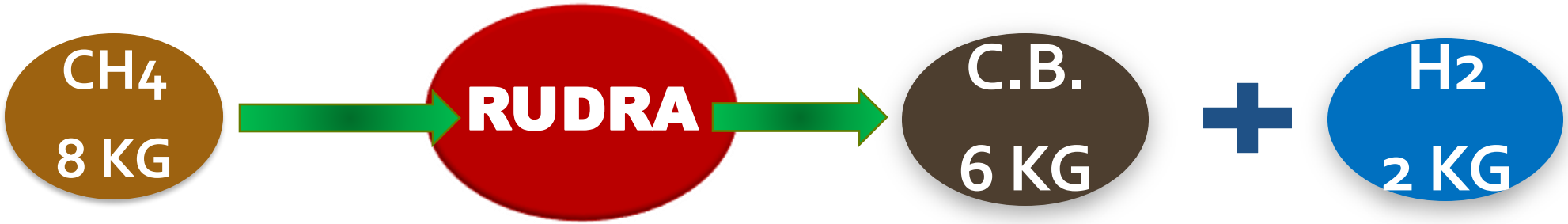
METHANE PYROLYSIS



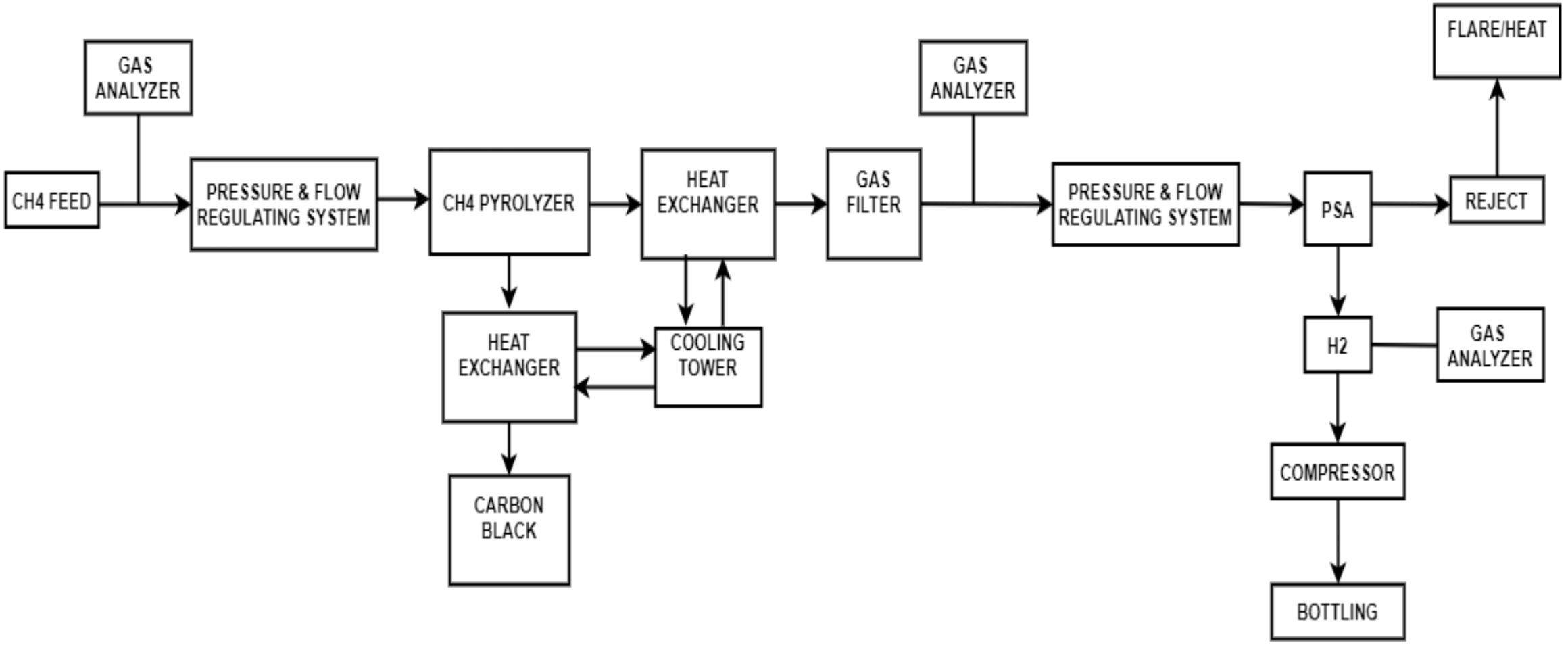
Methane is a rich source of hydrogen. The chemical reaction can be represented as follows:
$CH_4 \rightarrow C + 2H_2$

The methane undergoes pyrolysis in the presence of a catalyst at temperatures ranging from 800 to 1200°C. During this process, 4 kg of methane produces 1 kg of hydrogen and 3 kg of carbon.

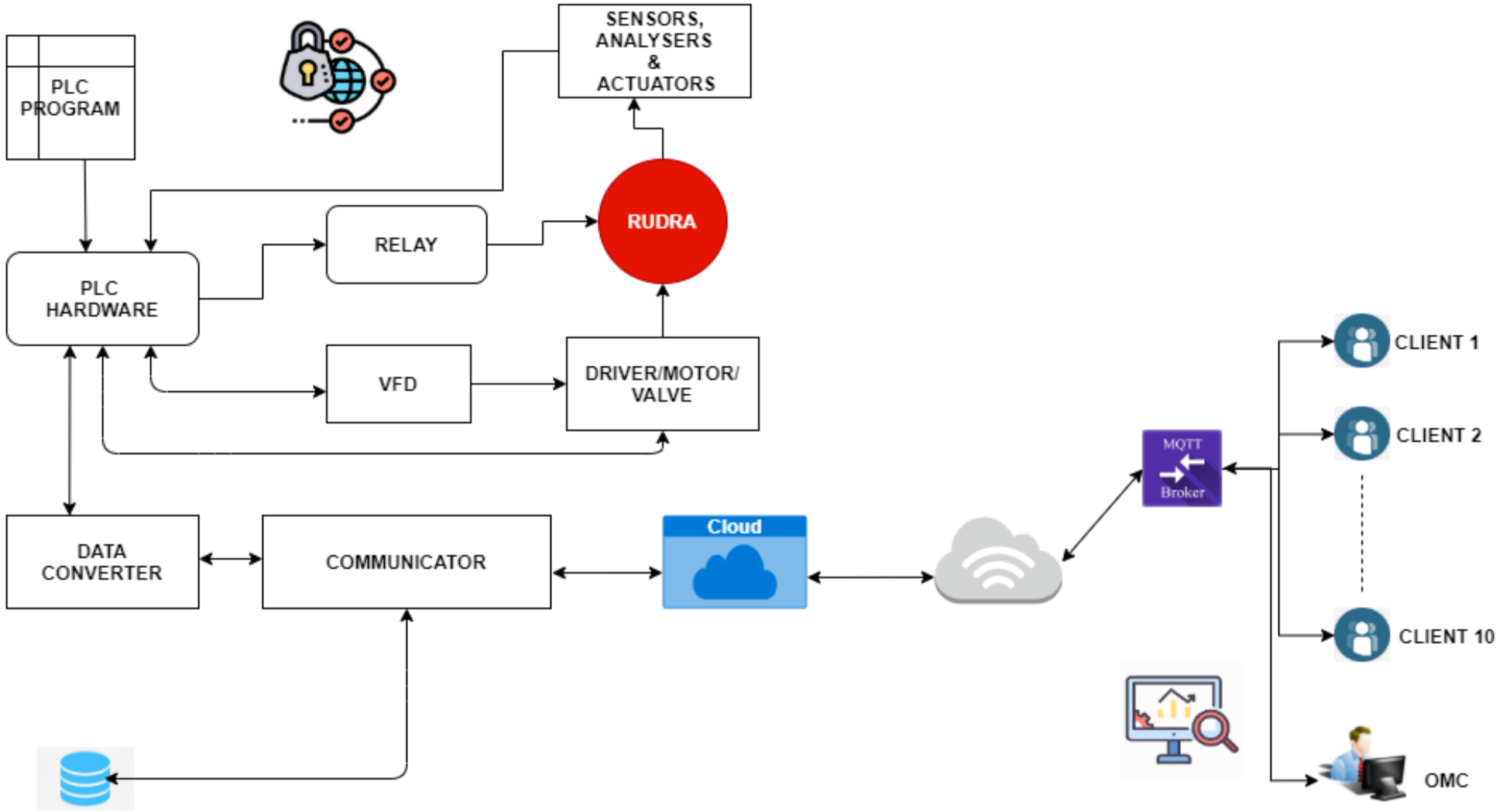
Remarkably, this process requires only 10 kWh of power to produce 1 kg of hydrogen. Furthermore, it is worth noting that there is no generation of CO_2 during this process.



Pure Form Carbon H2 – RUDRA *(Block Schematic)*



RUDRA- AUTOMATION



RUDRA TECHNOLOGY

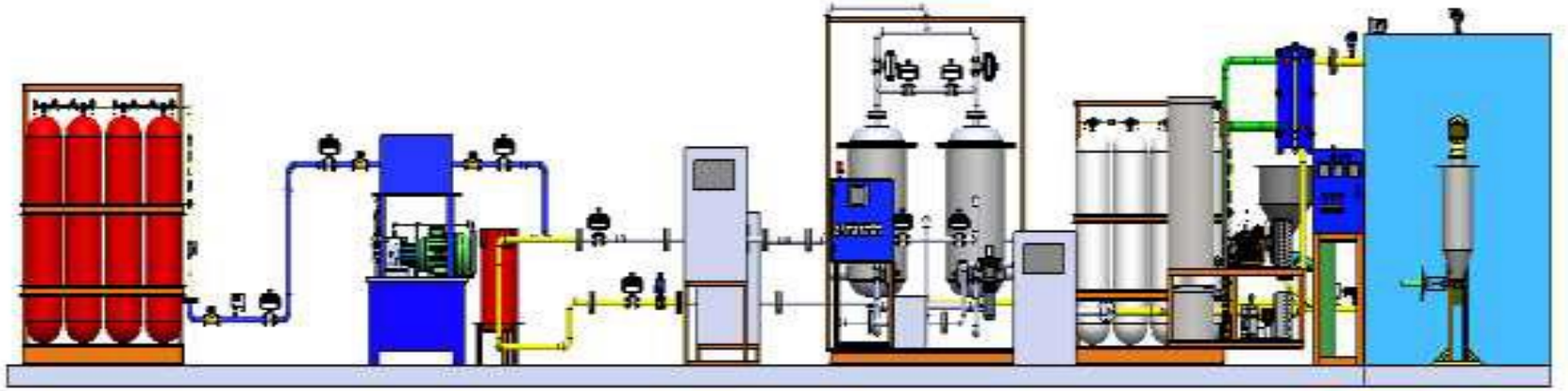
- Reactor - Parallel Tube
- Catalyst – Initial catalyst is Carbon black then Shift on Auto-Catalysis,
- Heating – Electrical Furnace
- Operational Temperature – 1110° C to 1125° C
- Efficiency – 93% to 96% (Conversion rate.)
- Throughput – C.B. & H2 (75% & 25% respectively)
- Operation – Automized.
- Zero waste

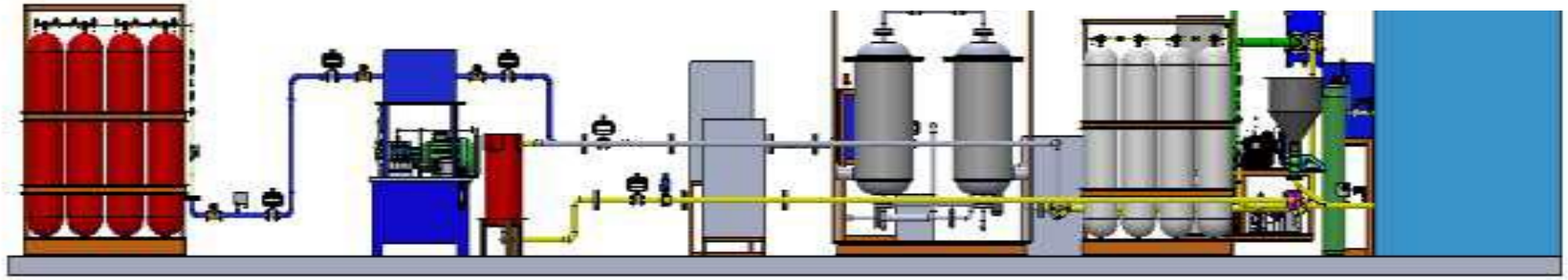
RUDRA FEATURES

- **Rudra** ***is mentioned in ancient texts as, 'mightiest of the mighty 'or 'who eradicates problems from the root'***

1. Modular Design: Easy to scale up and down
2. Highly Economical
3. Carbon Captured: Zero Emissions from the Process
4. Monetization of Carbon Black
5. Revolutionizing the Agro Economy by Connecting Farmers to the Energy Sector
6. Design with Pending Patents
7. No Transport Risks

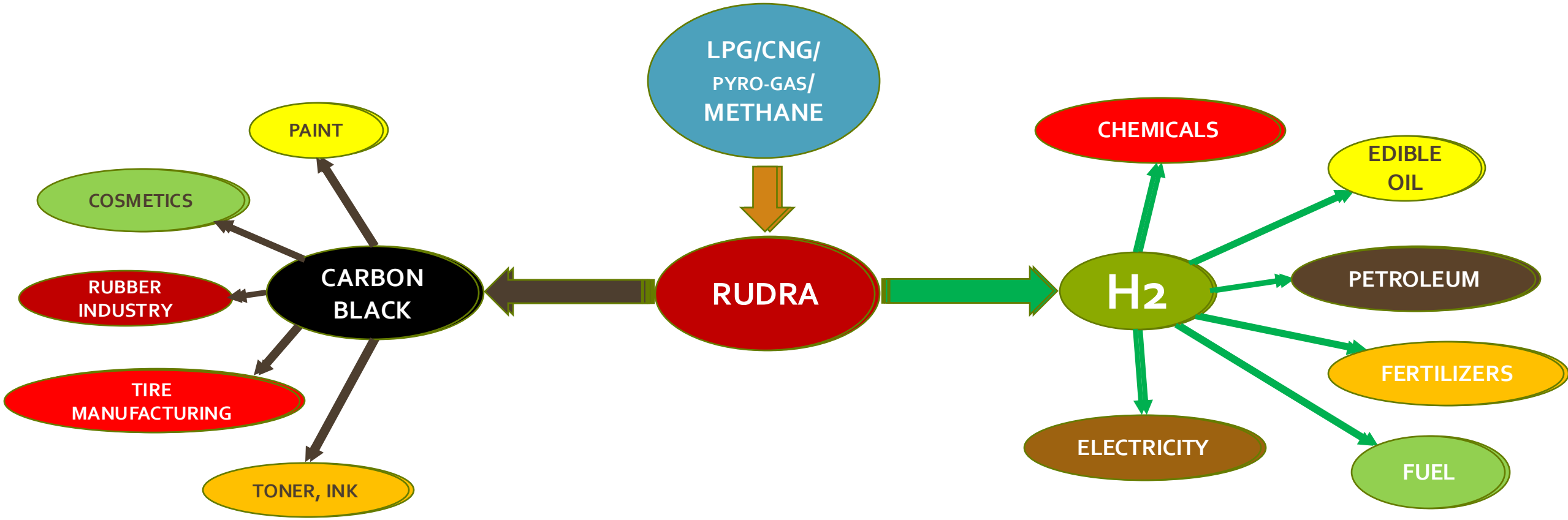
RUDRA- VIEWS





- Low footprint module – can be fitted in 40 ft high cube container
- Power – 35 KW connected load

H2 - APPLICATONS



BY PRODUCT – PyCB

PyCB - Carbon Black Produced by Methane Pyrolysis

Methane undergoes both thermal and catalytic cracking to yield hydrogen and carbon.

Upon pyrolysis, 1000 kg of methane yields 750 kg of carbon black and 250 kg of hydrogen.

Pure Form Carbon LLP has developed RUDRA, a thermal catalytic pyrolysis system.

The carbon produced through this technology possesses all the desired characteristics found in commercially available carbon blacks.

PyCB exhibits an extremely low ash content, making it highly suitable for various applications in industries such as paints, inks, rubber or tire manufacturing, plastics, food, steel, graphite, and many others.

By replacing fossil carbon black, PyCB helps stabilize carbon emissions in the environment.

Furthermore, PyCB has the potential to generate carbon credits, making it an avenue worth exploring.

Pure Form Carbon LLP is currently engaged in discussions with MITCON regarding carbon credit management services.

PURE FORM CARBON

Thank You

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