

M-STEKIO, MOBILE STEKIO EXTREME EFFICIENCY DIGITAL GAS COOKTOP, IS A REVOLUTIONARY GAS COOKING PHILOSOPHY ENCLOSED IN AN INNOVATIVE, MOBILE AND DIGITAL COOKTOP THAT BRINGS THE FUTURE TO THE KITCHEN OF YACHTS.

M-Stekio/Burnerway is the name of the revolutionary cooktop developed by 3P Engineering. This innovation represents a breakthrough in the field of gas cooktops, with particular reference to the burners that are completely re-designed from both technical and aesthetic point of view. M-Stekio resolves the insertion of the gas cooktop in tight spaces with limited gas resources, typical of yachts, with maximum saving of space and energy. The aesthetic design of M-Stekio/Burnerway is developed by the Politecnico di Milano, in the worldwide top ten universities for industrial design (QS World University Rankings by Subject, 2018). The proposed smart design takes advantage of the highly innovative gas burner developed by 3P Engineering - 8 patents registered in M-Stekio/Burnerway technology - which strongly differ from standard solutions available in the market: it is more efficient, safer and with reduced emissions and impact on the environment. "Mobile STEKIO - Extreme efficiency digital gas cooktop for campers, caravans and yachts" has received funding from the European Union's COSME Programme (2014-2020) - GA n. 733513.

3P Engineering

As an engineering company with a complete range of IoT-enabled products and services "Industry 4.0", 3P Engineering is an innovative SME that stands out for its expertise and cross skills in line with the most advanced technological frontier. Research and passion are the key ingredients that have guided the activity of 3P since 2002, through a toolkit of scientific knowledge and state-of-the-art instrumentation. 3P faces all kind of challenges related to technological changes, thanks to the ability to convert applied research into hi-tech

advisory, creating competitive advantages for customers and partners. With the distinctive ability of a competence centre, 3P creates continuous innovation with top performing solutions, such as products and business models of projects selected by the European Commission. In partnership with Digital Innovation Hubs, 3P studies and identifies new development opportunities and best practices, interpreting specific needs to translate them into cutting-edge solutions in various market sectors — Household Appliances, Oil & Gas, Mechatronics, Automotive, Medical, Renewable Energies, Naval, Aerospace, Infrastructures and Construction -, through its four Business Units: Testing Laboratory, Test Bench, Product Development, and Pre-Series. Their vision is based on the creation of continuous technological innovation for a sustainable development, through projects and solutions that perform progress.

The development of the project

3P Engineering has started developing solutions for the gas cooktop market for over ten years. These studies and researches (24% of HR of 3P Engineering are PhD) have resulted in 14 industrial invention patents: six obtained for projects by their clients and eight registered and held directly by 3P Engineering.

Established gas cooktop technology had been static for about twenty years: M-Stekio/Burnerway by 3P Engineering introduces an important innovation based on their registered patents. The market analysis have highlighted some particular needs with regard to gas cooktops referred to "tourism in motion" of yachts.

M-Stekio/Burnerway allows to have the complete range of all the lev-

Burnerway is the name that will be used commercially. This innovative gas cooking technology has been developed by 3P Engineering.

burnerway

The aesthetic design of M-Stekio/Burnerway has been developed by the Politecnico di Milano, one of the top ten universities for industrial design worldwide.

els gas power, which currently correspond to different burners, in one burner, to save space. This innovative gas cooktop offers maximum modularity, thanks to a burner equipped with 400 W central flame suitable for the smallest pots like moka and to melt chocolate: it works as a continuous flame-bed that allows using pots of different diameter, also smaller, on the same burner. Thanks to the innovative technology based on a new stoichiometric ratio developed by 3P Engineering, time to boil is reduced of the 20%, to reduce gas consumption, allowing yacht a greater energy autonomy. It also means +10% efficiency and -10% CO₂ emissions.

The importance of aesthetic design is especially appealing with regard to yacht that pay attention to elegant details of interior design. M-Stekio/Burnerway is the first technology in the world to reduce the height of the cooktop grids by 50% less than standard grids: its height is \leq 20mm. Furthermore, M-Stekio gains the safety worldwide record for gas cooktop, reaching the SIL 3 (Safety Level), since it is

equipped with a single valve for each burner and a general valve in the whole cooktop, avoiding risks of gas leakage in case of malfunction of single valves. In addition, an automatic cooking time setter is included, erasing risks of forgetting the gas ON. Finally, M-Stekio/Burnerway allows saving $10\%~\mathrm{CO_2}$ emissions, that means less heat rays and fumes while cooking and an improved Indoor Air Quality in the kitchen of yachts with a healthier interior environment.

The market

Burnerway is the name that will be used commercially. The innovative gas cooking technology developed by 3P Engineering is perfect for yachts and home too, in particular for any kitchens, to combine the best gas technology with the excellence in design, thanks to its unique appearance due to the grills and the native digital control system. More generally, it is suitable for "tourism in motion", thanks to its special characteristics: Burnerway is able to be fitted in any en-



NauTech

01/10/18 14:40

PRODUCTS





The official presentation of M-Stekio/Burnerway will be at Metstrade, 13-15th November 2018, stand 7.248.

Burnerway is able to be fitted in any environment that looks for the best in the gas cooktop market, combining innovative technology and unique design.

vironment that looks for the best in the gas cooktop market, combining innovative technology and unique design. The official presentation of M-Stekio/Burnerway will be at Metstrade, 13-15th November 2018, stand 7.248. 3P Engineering is in contact with the three main gas cooktop builder for boats: their strategy, indeed, is to go to the market by a strong partnership with one of the leading cooktop manufacturer. M-Stekio/Burnerway offers several advantages to producers, like saving time and costs thanks to only one code for all the burners, and consequently the automation of the assembly process.

3P Engineering History

3P Engineering was founded in 2002, in Ancona, Italy, winning the "E-capital" Business Competition as an innovative engineering company. In 2008, 3P moved the headquarters to Chiaravalle (Ancona) and this is where the thermo-fluid dynamic and electrical divisions were born in the "Testing Laboratory" Business Unit. The engineering capacity of 3P evolves in the realization of the first "Test Benches", with which performance tests are carried out, creating a further Business Unit. At the same time, the company's offer is enriched with simulations able to "virtualize" the product development path, thus giving life to the "Product Development" Business Unit. In 2011, 3P started the "Combustion Testing Laboratory" and the development of software applications. After a year, 3P's range of solutions was further extended with the introduction of mechanical machining through multitasking work centres, with plastic molding and heat treatments. In 2013, 3P finalized a strategic partnership and became part of the Dafram group at 50%, the international leader in Oil & Gas and the production of valves. In the same year, 3P started a local unit in Urbisaglia (Macerata), specifically dedicated to Oil & Gas, where 3P also deals with Research & Development for Dafram, thanks to its excellent expertise. In 2015, 3P developed with Dafram the Control Valve Sizing - CVS web platform, based on IEC 60534, the international standard for industrial process control valves, key tools for engineering companies and Oil & Gas specialists. In the same year, 3P also received an important national feedback on the validity of its Testing Laboratory with the accreditation according to UNI CEI EN ISO/IEC 17025:2005, by Accredia, the National Accredit Authority. In this period, 3P further strengthened its test offer, starting the Testing Laboratory also for the polymer division. In 2016 3P was chosen by the European Commission for two particularly innovative projects: "Chimera- CHIckens Manure Exploitation and RevAluation project", for the poultry sector - and M-Stekio, a revolutionary technology for gas cooktop that encompasses innovation in terms of concept and design too, and from which Burnerway was born.

In 2016, 3P also obtained the extension of accreditation by Accredia, to the chemical analysis of the Testing Laboratory, confirming the validity of its offer. In 2017, the anniversary of the company's first 15 years, 3P marked an important milestone as the only company in Italy to have got accreditation in accordance with the international ISO/IEC 17025 standard, to control the Fluid Dynamic Efficiency (FDE) of fans, guaranteeing the exact consumption class for the Energy Efficiency Label (EEL). A further success was also achieved for the Testing Laboratory Business Unit, which receives the extension of the tests accredited by Accredia, with the addition of performance tests of fans and kitchen hoods. 3P's range of products and services has also been expanded with the creation of the new "Pre-Series" Business Unit, for machining, prototyping and micro production. Finally, in 2017, 3P received the "Seal of Excellence", Certificate of Excellence by the European Commission for the "Zero-Fowl" project dedicated to the poultry sector and linked to the distribution process of the innovative European project "Chimera".

Testing Laboratory

3P Engineering Testing Laboratory is an international point of reference for companies of every market sector and world leader for the "Capture Efficiency". 3P is provided with an equipped internal workshop for the preparation and production of samples, and offers transversal skills for the widest choice of tests: laboratory metals, polymers, thermo-fluid, but also special tests on specific requests, which reflect the ability to 3P Engineering to translate market demands into operational solutions. As a UNI CEI EN ISO/IEC 17025:2005 accredited laboratory, 3P is the only one in Italy to have got the 17025 Fluid Dynamic Efficiency (FDE) accreditation. Thanks to its expertise in the Oil & Gas market sector, 3P is also one of the world's rare companies to perform valve tests. The first metallurgical laboratory in the Marche region in Italy, 3P still maintains the primacy at the regional level as the only structure provided with an electronic scanning microscope.

Test Bench

3P Engineering is able to perform complete range of advanced automatic test and measurement systems that reflect the qualified skills of industrial system integrators, with the

ability to interpret customer needs to create specific customized systems. Result of the most cutting-edge functional validation technology of the products, the 3P Engineering Test Benches are essential products not only to benefit cost and time advantages, but also strategic systems from the Research & Development phase, to test the characteristics of the prototype and drive the company to the best implementation. From ergonomic systems dedicated to cooking, to products for reliability and end of line testing, from products for transport and packaging, to custom systems, 3P Engineering Test Benches are completed by the "3P Labware" software and already chosen from Europe to America by top international players.

Product Development

3P Engineering created the "Product Development" Business Unit to translate an idea into a new product or to improve the performance and characteristics of an existing good. Using state-of-the-art 3P software, 3P is able to obtain CAD models, FEM structural simulations and CFD thermal-fluid dynamics, which allow the rapid selection of virtual prototypes. Concept and outline are thus transformed in-



to models within an evolved virtual environment, capable of reproducing even the functioning and real use of the prototype, for a development of engineering of maximum precision. A daily challenge of Research &

Product Development that 3P successfully tackles, combining academic background, with the operative capacity acquired in over fifteen years in the market, so much as to be a point of reference for international players for distinctive design and implementation skills.

Pre-Series

From the passion and knowledge of 3P Engineering to mechanical machining, the "Pre-Serie Business Unit" was created to produce micro production elements, prototypes in pre-series products and components, using knowledge and technology of a real mechatronic atelier. The distinctive skills and the quality equipment of the machines that make up the 3P Engineering equipment, allow the company to obtain flawless output quickly and at competitive prices, which stand out on the market for the accuracy with which they are made. The advantage for customers to be able to interact with a single interlocutor qualified in the various stages of mechanical machining up to the assembly of components reflects the transversal skills developed by 3P Engineering thanks to the synergies among the various Business Units.

L RIGHTS RESERVE



VauTech

69

NT_2018_005_INT@066-069.indd 69 01/10/18 14:40