

Alexander Georgiev Kostov and Dimitar Todorov Ivanov (*Bulgaria*)

Alexander and Dimitar were representatives of PTG N. Vaptzarov, Vratsa, in the Bulgarian Welding Society (BWS) 2025 welded art competition.

Their exhibit is a mechatronic system depicting the cycle of nature and biodiversity on Earth. Various representations of flora and fauna are located on rotating gears. The idea of the participants is to convey a message: if one of the species disappears, the others also stop their existence (development). This is also emphasised by the symbols welded on the base plate for the species - fish, owl and apple – which represent the vulnerability of the ecosystem and the risk of breaking the entire cycle if even one of its elements disappears. The circle is made thanks to the “Sun”, mounted on an arch, symbolising the sky. In the base plate of the installation are embedded green LEDs, symbolising fields and grasses – a source of life for many other species. At the other end of the “sky” is mounted a “satellite”, embodying humanity’s eternal quest to discover new worlds.

They have depicted half of the globe using curved strips and on it, with thin sheet of stainless steel, are situated examples of the flora and fauna. The sun with its life bringing light is mounted on one of the strips. It symbolises the fire that is the essence of life beginning.

The symbol of the gymnasium is on the inside of a rectangular plate made from scrap metal with the letters and digits cut in a suitable form. The logo of the school is laser engraved.

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Exhibit “Fire Came in the Beginning”

The whole system is driven by an electric motor from an old car’s windshield wiper, with a circuit board to adjust the revolutions. The power supply is provided by a 12 V battery.

Materials used include carbon sheet metal, square profiles, copper wire and copper cable shoes, scrapped gears, metal studs, nuts, washers and screws.

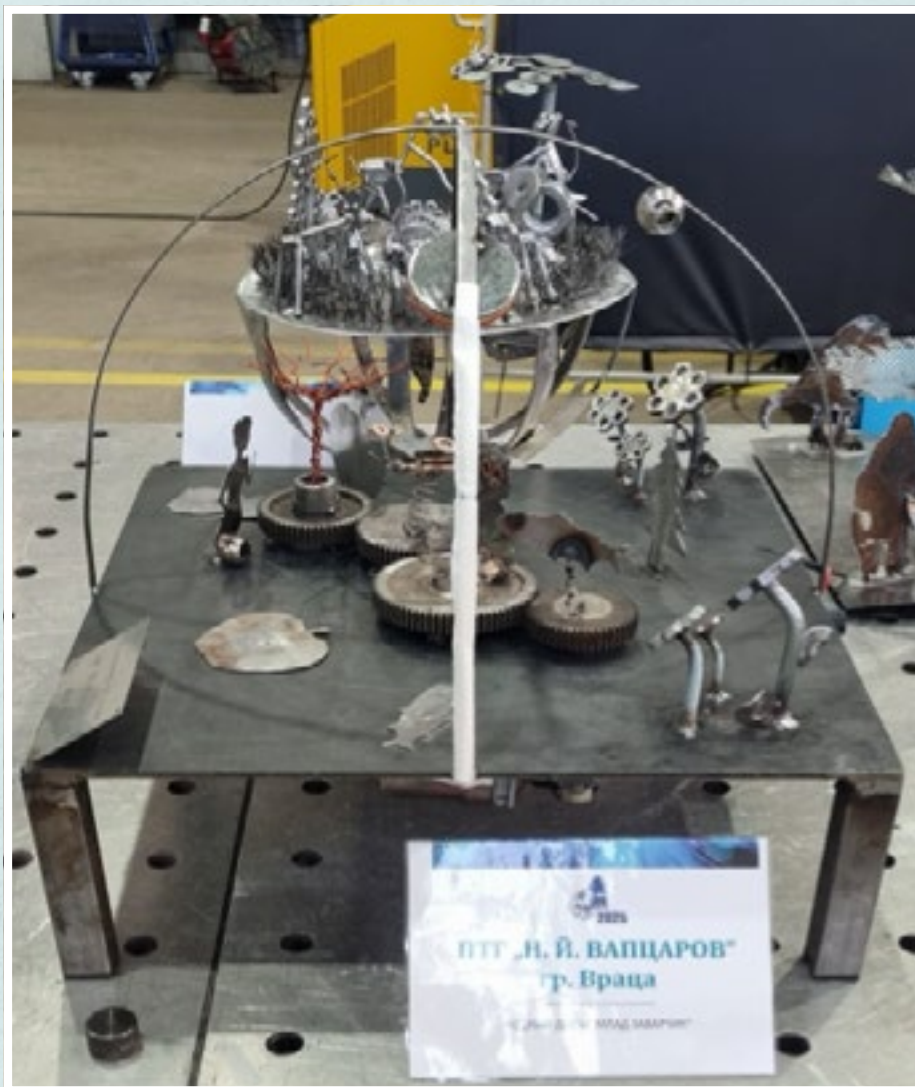
Welding methods used were Gas Metal Arc Welding (process 135) and Gas Tungsten Arc Welding (process 141) with appropriate filler materials and shielding gases.

Dimensions of Exhibit

45 cm high x 70 cm diameter



Alexander Georgiev Kostov and
Dimitar Todorov Ivanov (left to right)



Fire Came in the Beginning
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