



# Plasma Laser Technologies Ltd.

## Line of Business

Development and Manufacturing of Hybrid Welding Technologies and Applications

## Established

1995

## Leading Executive

Yoav Navon  
Chairman & CEO

**P**lasma Laser Technologies Ltd. ("PLT") designs and produces a patented & unique line of hybrid welding systems, named Super-MIG®, aimed at offering a substituting technology to the traditional MIG/MAG, SAW, as well as the laser-based welding installations in the industrial market.

PLT is mainly targeting the welding applications in industries requiring automation (i.e. using robots or "hard automation") within manufacturing lines: automotive (under body, ride control - chassis, frames, cradles, shock absorbers, various types of brackets, bumpers - exhaust & catalytic

Currently, the company offers the following models:

- Light and medium duty - for ferrous steels in thicknesses of up to 8-10 mm.
- Heavy Duty - for ferrous steels and Titanium, in thicknesses of up to 40 - 50 mm.
- Aluminum system - for welding of AL alloys.
- Hard Facing/Overlay system.

The Super-MIG® Hybrid system combines two power sources – MIG/MAG and Plasma Arc – into one operational welding torch. The patented process synchronizes the major advantages of a plasma arc for deep penetration with the high arc efficiency and metal transfer of the GMAW.

The system combines in one processing torch both a consumable electrode (MIG-GMAW) and a non-consumable electrode (plasma arc), by placing the axis of both in an acute angle facing the work piece. The above axes are placed in a plane and intersect each other at the work piece near the weld line, with the consumable electrode disposed outside the constricting nozzle. The interaction between the plasma arc flow and the MIG arc promotes wire heating and current transfer at the anode spot (at the end of the GMAW filler wire) where the molten weld metal droplets form and subsequently detach. A magnetic force is established as a result of the interaction between the electric currents passing through the two electrodes. This magnetic force causes deflection of the plasma arc towards the front of the welding pool, thus compensating for the plasma arc's natural tendency to trail behind the torch axis during high speed welding. The resultant effect is a substantial increase in the plasma arc rigidity and stability leading to a substantial increase in penetration depth and welding speed, as well as much less distortion of the work-piece and much less spatter.

PLT operates from Yoqne'am, Israel, and through a wholly-owned subsidiary in Detroit, U.S.A. The company offers its products through nominated distributors in the U.S, Europe and the Far East. The company's products have been initially introduced during 2008, and have seen a steady growth in sales' numbers ever since. All products are CE approved and conform with all necessary safety regulations and standards.



converters), military, utilities & power generation, boilers, tanks & pressure vessels, white goods products, transportation & heavy machinery, tubes & piping, shipbuilding, and Tier-1/Tier-2 suppliers for above production fields.

PLT's hybrid systems weld almost all known applications, using plasma, MIG/MAG or SAW, and some laser, capable of welding all types of welds: butt, fillet, overlap (seam), spot, stitch.

The technology also provides a uniquely efficient solution for welding of different materials, by offering specific and specially designed solutions: regular & stainless steel, Hi-Strength, armored and DP, Aluminum, Titanium and other alloys, different coated materials, incl. galvanized, Zinc & AL coated.



## Contacts:

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