
CEA
WELDING TOGETHER
BRIDGE
4COMPANIES

DIGITECH-series

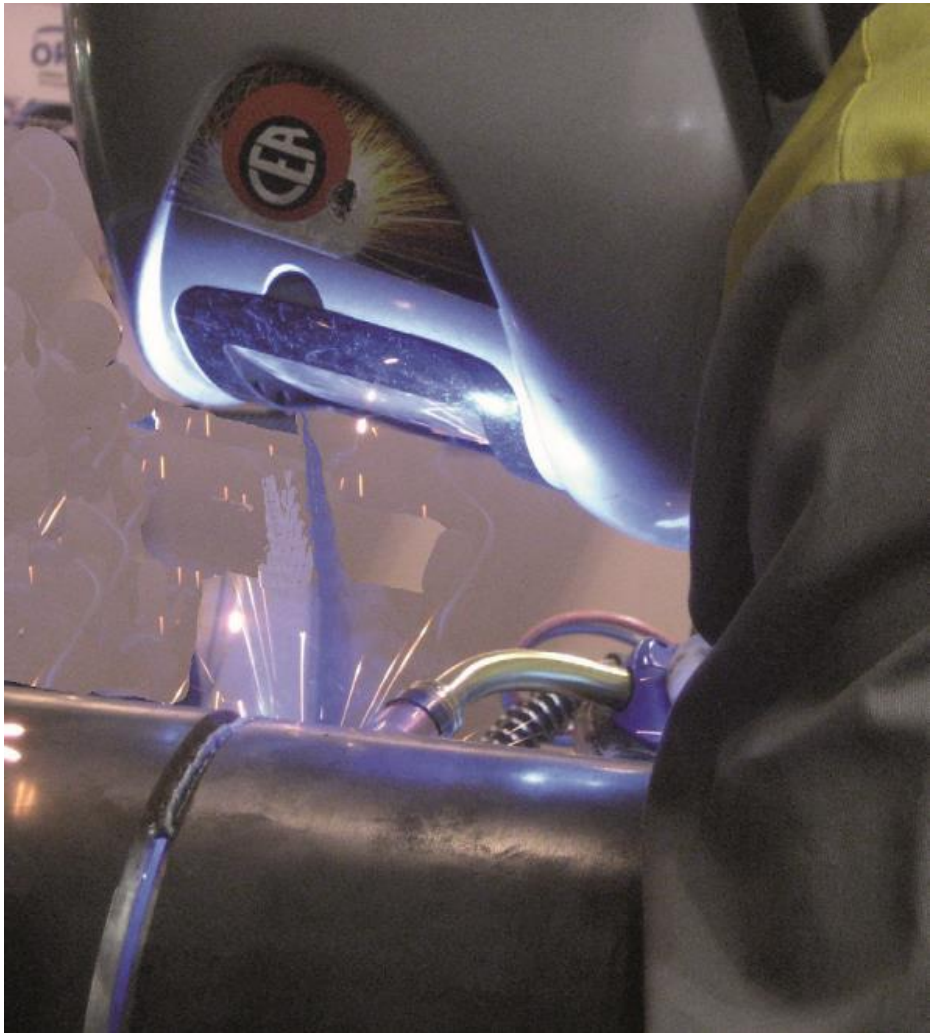
- DIGITECH 3200
  - With integrated feeder
  - With separated feeder
- DIGITECH 4003
- DIGITECH 5003

Standard MIG/MAG processes

Vision.PIPE

- Root-welding of pipes
- In all positions
- Could replace MMA, TIG
- Time-Reduction

vision.PIPE



CHANGE YOUR BELIEFS

vision.PIPE

filling-up any open root

- For large open gaps

FRONT

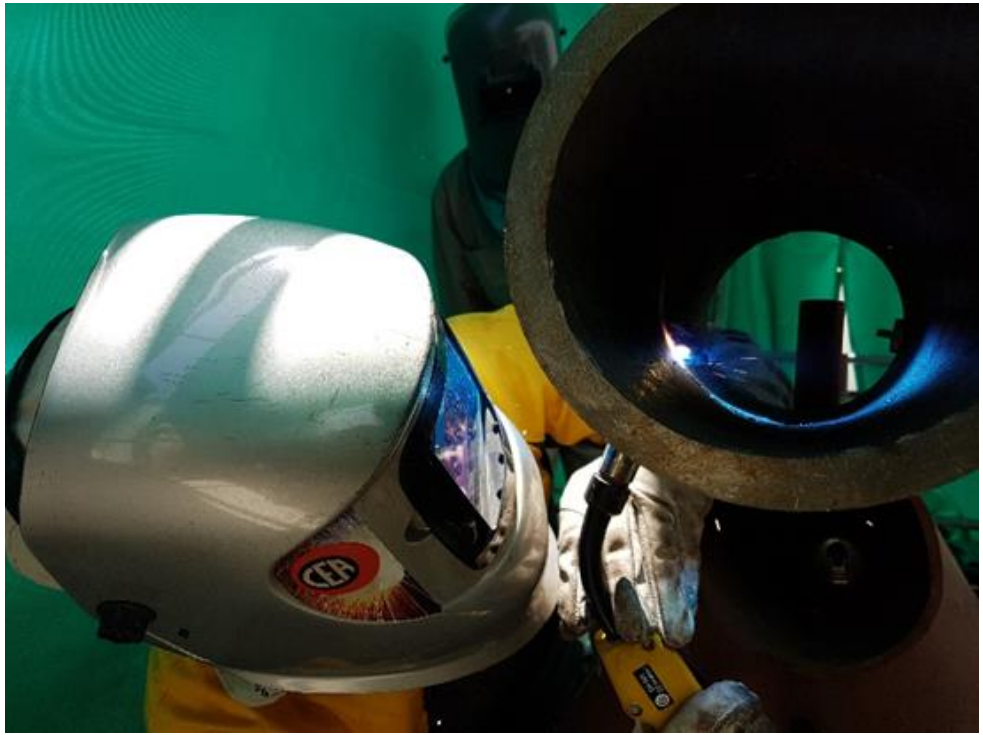
BACK

CHANGE YOUR BELIEFS

vision.PIPE

Advantages, Conclusion

- Faster! than MMA and TIG
- Low heat input
- *Simple* edge beveling
- Less qualified operator
  comp. to TIG / MMA



vision.COLD

low heat transfer

- For thin sheets
- With lowest-possible metallurgical effects
- For MIG brazing
- In all positions

Vision.COLD

open gap thin joints

- For open gaps on <u>thin</u> plates

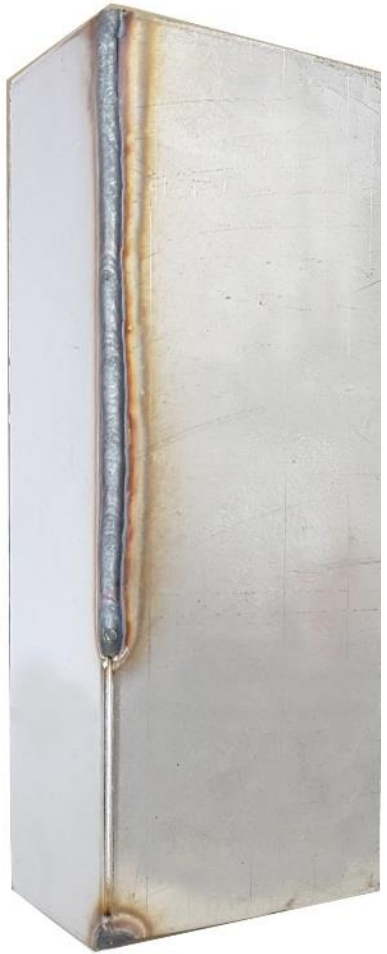
Vision.COLD

MIG brazing

- For MIG-Brazing
- Very limited damage on Zinc-coating

Vision.COLD

- Vertical-down corner-welds



Vision.COLD

Advantages - conclusion

- Ideal for thin INNOX-sheets
- MIG-Brazing
- Higher welding-speed … than classical short-arc
- Significant reduction of heat input
- Minimal deformation
- Reduced spatters *(spatter-free)*
- Corner-welds

Vision.ULTRASPEED

high welding speed

- For welding Steel, Innox and Aluminium
- Up to 40% faster
- Less distortion
- Less rework

CHANGE YOUR BELIEFS

Vision.ULTRASPEED

Advantages

- Ideal on <u>medium</u> thickness
  - 1,0mm wire .... 3mm sheet
  - 1,2mm wire …. 5mm sheet
- Narrower welding beads
  - Less filler material and gas consumption
- No transitional arc (from short-arc => spray-arc)
  - Spray-Mode starts earlier (at lower Amps)
  - In background – Puls
- Lack of spatters

vision.POWER

deeper penetration welding

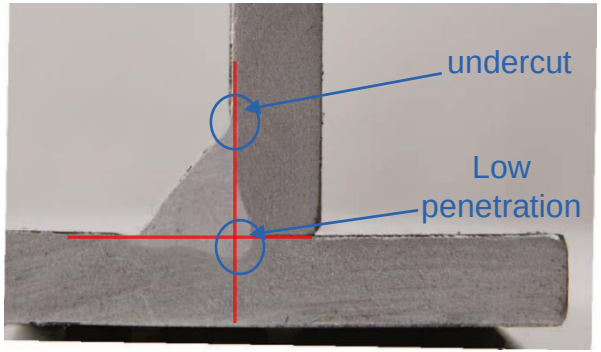
- For medium/large thickness
- **Steel**, Innox and Aluminium

Vision.POWER

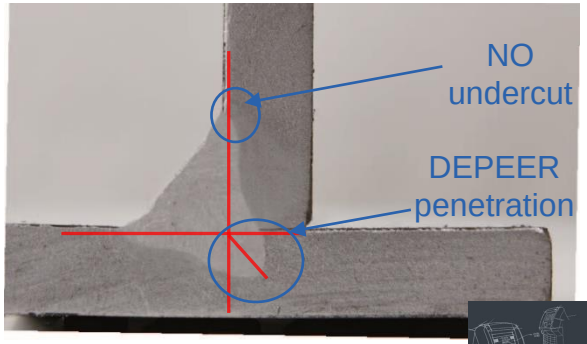
deeper penetration

- Narrow arc cone
- Arc-pressure is concentrated
- Increased penetration

Standard MIG/MAG

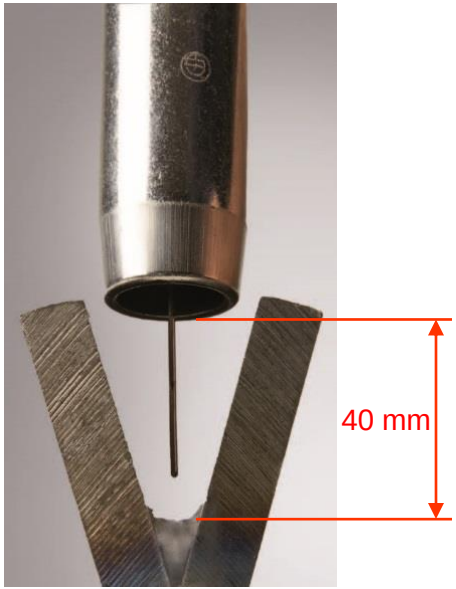


vision.POWER



Vision.POWER
long stick-out

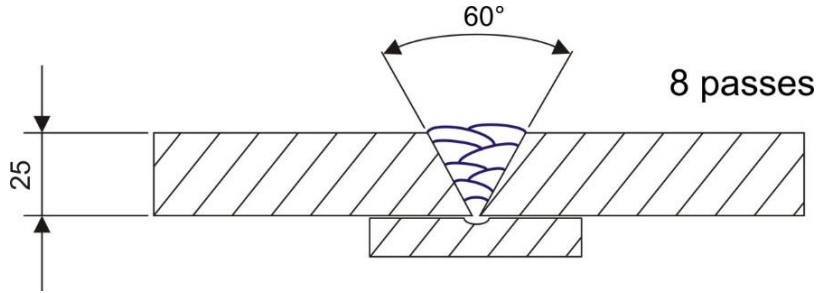
- Very narrow joints
- Very long stick-out

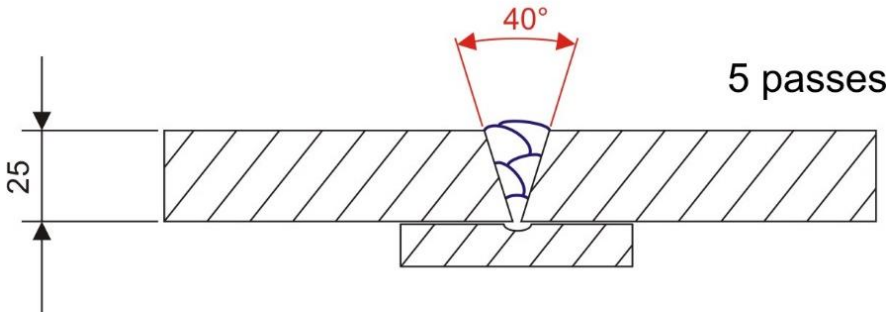


Vision.POWER

save material and time

- To replace classical Spray-arc
- Faster welding
- 40°, … edge-preparation





Vision.POWER

Advantages / Conclusions

- Deeper penetration - at same welding currents (Spray-Arc)
- Higher welding speed (comp. to Spray-Arc)
- Less consumption of filler material and shielded gas
  - No filler material overdepositing in butt joints
- Less welding passes (40°, … edge bevelling)
- No Undercuts
- Heat reduction to avoid hot-cracks

MIG PULSE processes

Special MIG PULSE process

- vision.PULSE-UP
  for vertical-up welding
- vision.PULSE-RUN
  for fast puls-welding + good optics
- vision.PULSE-POWER
  for deep penetration + good optics

vision.PULSE-UP

UP TO 40% FASTER

- For vertical up welding
- Combination of
  - MIG Pulse (material-melting, spatterfree, nice optics)
  - VisionCOLD (material-solidifying)
- Very simple
- Very fast – compared to traditional Christmas-tree or Triangle

- Narrower, well-dimensioned seam
- Low heat (thin sheets, …)

- Possibility of Automation

vision.PULSE-UP

Applications:

- Positional welding
- Steel, Innox, Aluminium
- MIG brazing with low heat-input

- Stainless steel welding
  - Petrochemical industry
  - Food industry

Vision.PULSE-RUN
FAST PULSE-WELDING

UP TO 40% FASTER

- For fast welding-speed + nice optics
- Combination of
  - MIG Pulse (spatterfree, nice optics)
  - Ultraspeed (speed)
- Steel, Innox, Aluminium
- Well-dimensioned seems
- Faster welding
  (40% more than traditional MIG pulse)
- Less heat-input
- No deformation (Innox)

vision.PULSE-RUN
Applications

- Robotics, Automation
- Steel, stainless and Aluminium
- Fabrication work
- Steel erection
- Petrochemical
- Food industry
- Railway wagon manufacture
- Tanks and containers

vision.PULSE-POWER
HIGH PENETRATION & SMOOTH BEAD

- For deep penetration + nice optics

- Combination of
  - Mig-Puls (spatter-free, nice optics)
  - Vision-Power (Deep penetration)

- Simple. Good optics – without torch-manipulation
- No undercuts (bec. of combination)

- Less consumption of filler-materials and shielding-gas
- Less fume emission

vision.PULSE-POWER
Applications

- Steel
- Medium/large thickness
- “T” fillet welding

- Truck and vehicle manufacture
- Shipyards
- Railway wagon fabrication
- Tank and Container