

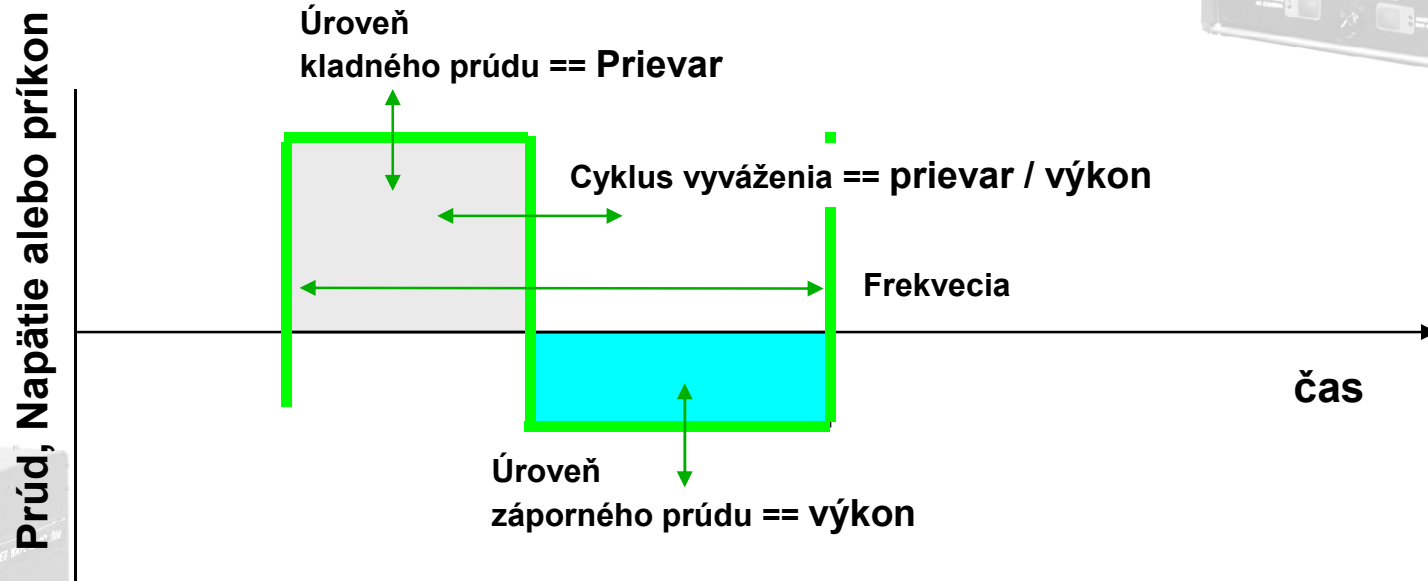
***Súčasný pokrok
v technológii
zvárania pod tavivom***



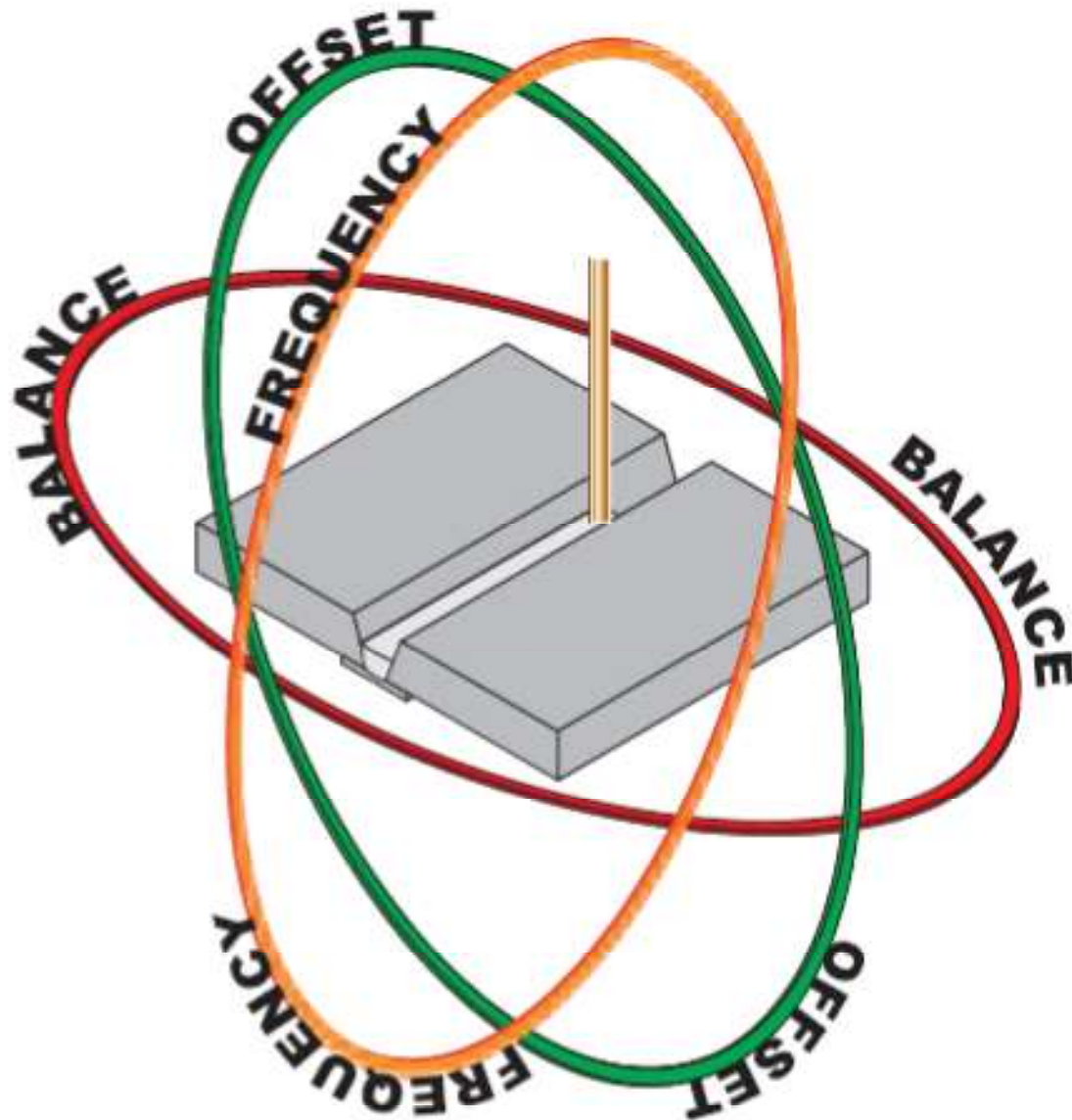
Power Wave AC/DC 1000

LINCOLN[®]
ELECTRIC

Technológia riadenia vlny : nekonečne variabilný AC



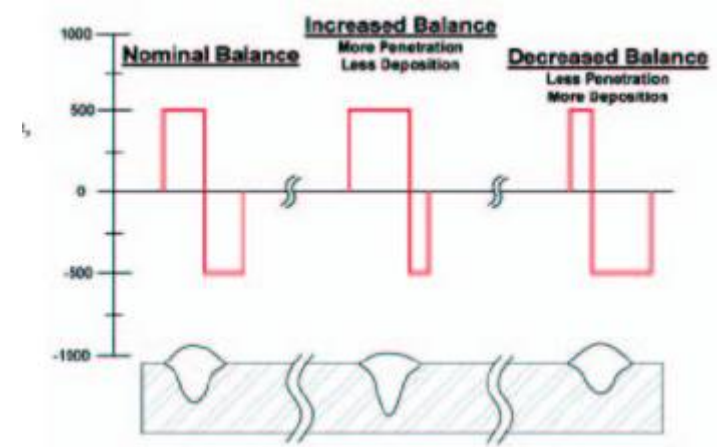
- ◆ Tvar vlny môže byť menený za účelom riadenia prievaru a tvaru zvaru.
- ◆ Výkon zápornej elektródy bez fúkania oblúka
- ◆ Vzájomné pôsobenie oblúkov je riadené s fázovým posuvom



a d v a n t a g e s



Efekt vyváženia vlny



70% DC Kladný

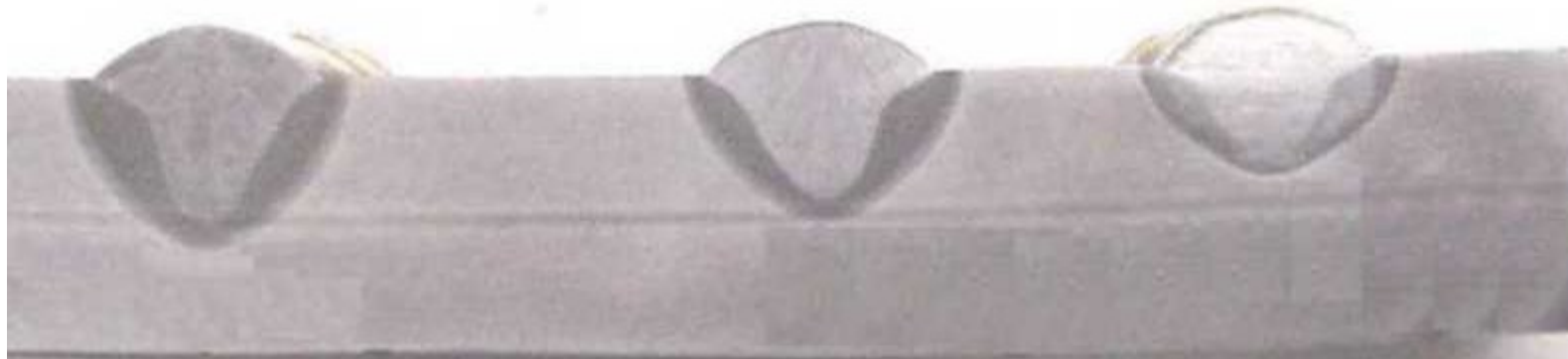
Prievar = 0.387"

50% DC Kladný

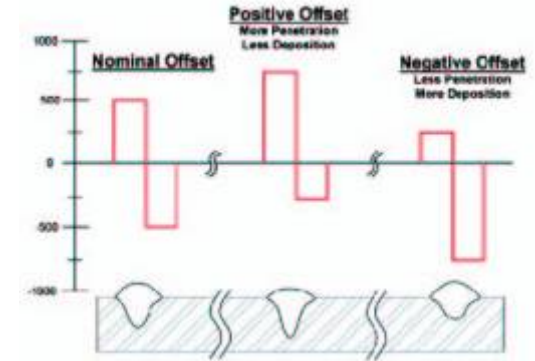
Prievar = 0.346"

30% DC Kladný

Prievar = 0.242"



Efekt DC vyrovnania



Kladný = 835 A

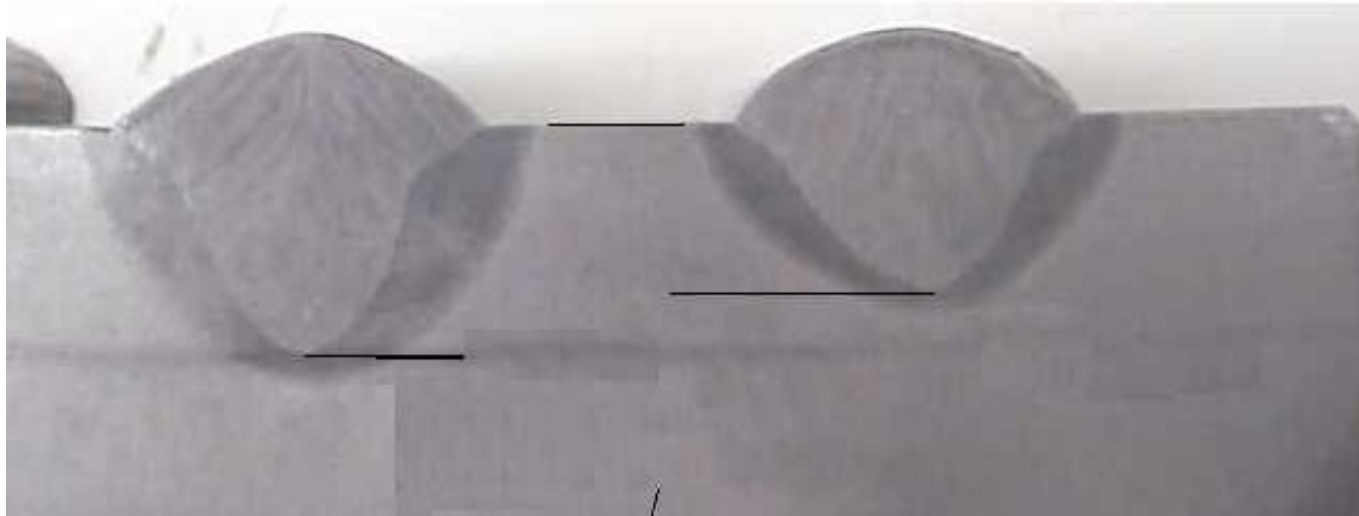
Záporný = 519 A

Prievar = 0.366"

Kladný = 450 A

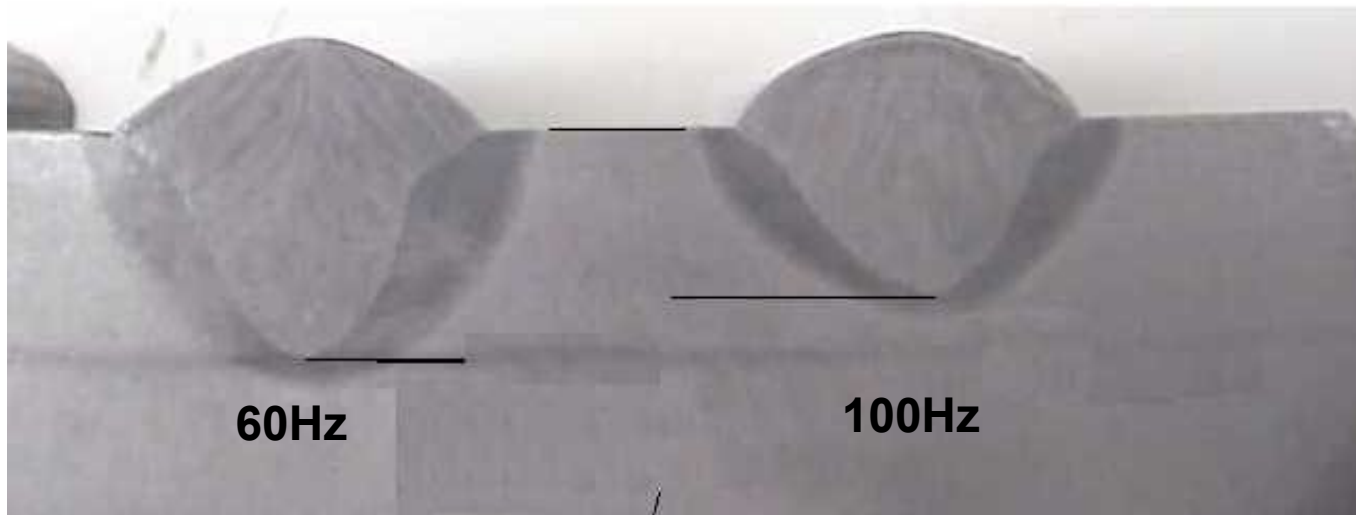
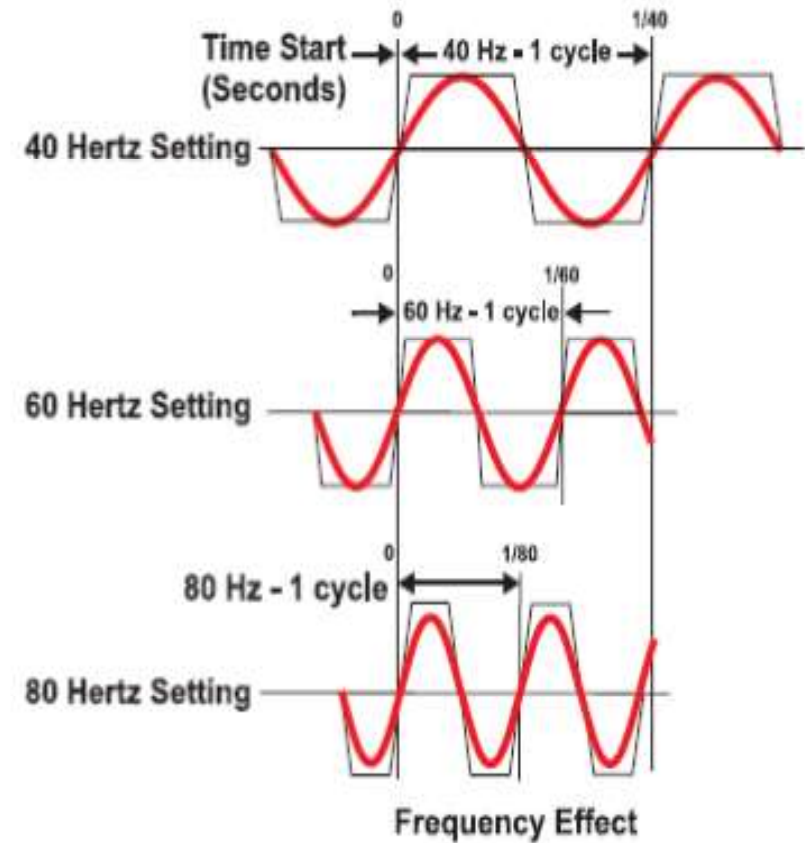
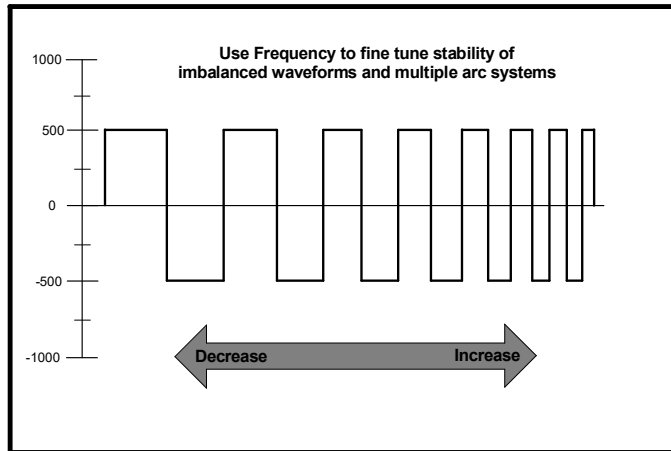
Záporný = 822 A

Prievar = 0.280"



Efekt zmeny frekvencie

Frequency



Efekt zmeny frekvencie: špirálová rúra



BOP Weld with Frequency = 50Hz



Efekt zmeny frekvencie: špirálová rúra



BOP Weld with Frequency = 60Hz



Efekt zmeny frekvencie: špirálová rúra



BOP Weld with Frequency = 70Hz



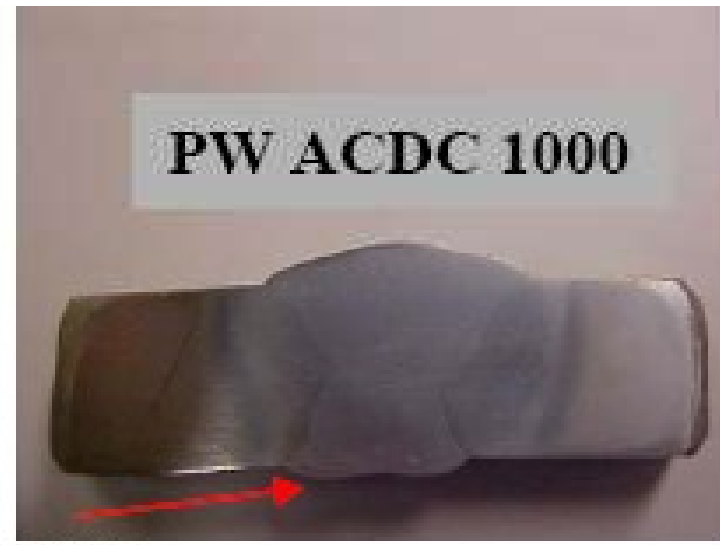
Efekt zmeny frekvencie: špirálová rúra



BOP Weld with Frequency = 80Hz



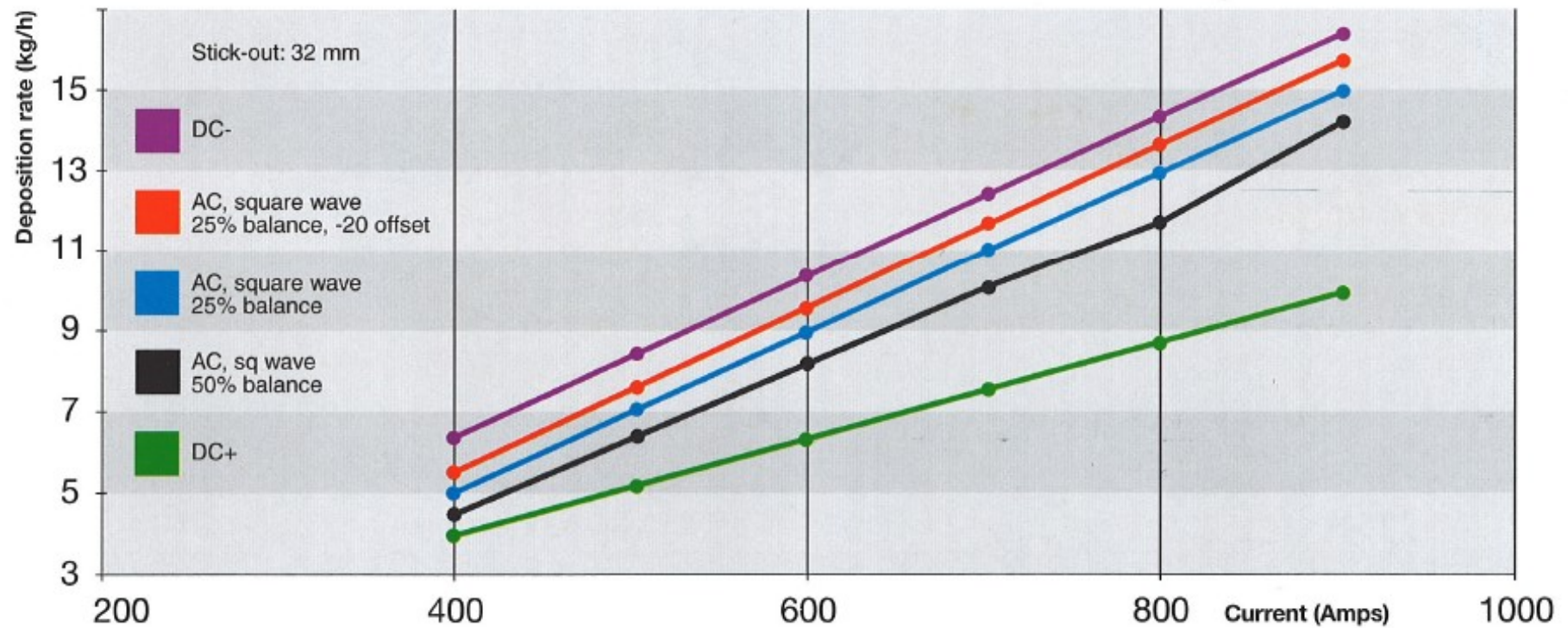
Power Wave AC/DC: Špirálová rúra



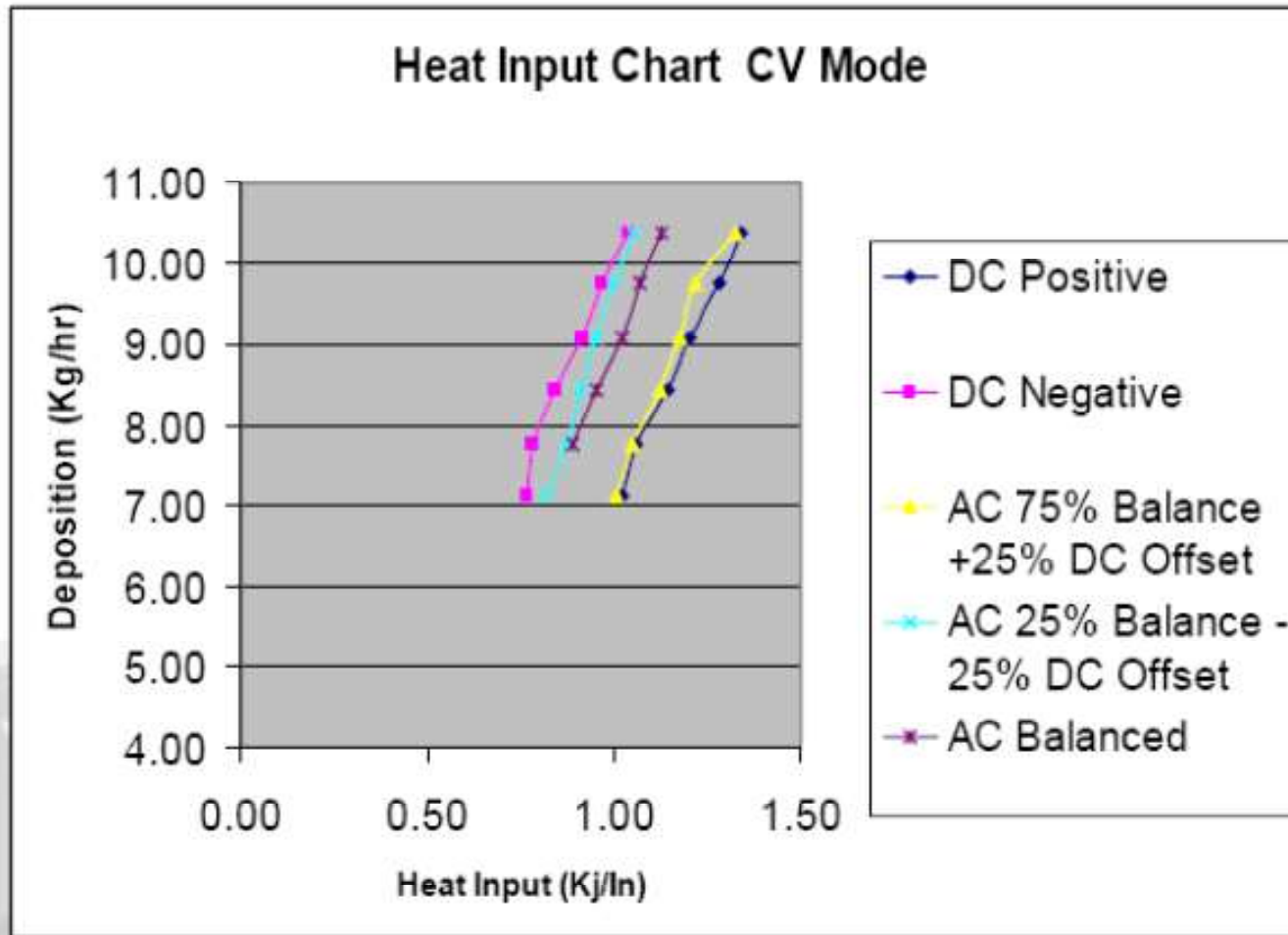
ID BEAD

Typické výkony odtavenia

Melting curves of a 4 mm diameter wire with a PW AC/DC 1000

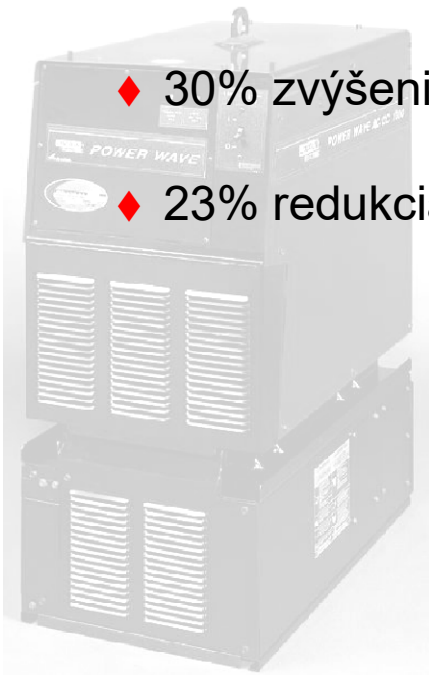


1.6mm NiCroMo – 4 / Mil 800 HPNi



Aplikácie: Tlakové nádoby

- ◆ Viacvrstvé zváranie do úzkeho žľabu
- ◆ dvojoblúkový AC-AC SAW proces
- ◆ Hrúbky plechov 165 mm
- ◆ 62 vrstiev
- ◆ 30% zvýšenie rýchlosti
- ◆ 23% redukcia tepelného príkonu



Aplikácia: Prestavba formy

- ◆ **Aplikácia na točivé odlievanie**
- ◆ Povrch lejacích foriem je opravovaný s SAW
- ◆ Max. teplota liatia. 245 °C
- ◆ 50 % zvýšenie rýchlosti
- Redukovaný čas prestavby
 - z 11 dní na 6-7 dní



Aplikácia: Offshore konštrukcie

◆ Zakružovanie a zváranie

◆ Skúšobný systém - April 2003

◆ 28 zváracích staníc

◆ ušetrenie odhadom 30 000 hodín ľudskej práce založené na skúšobnej prevádzke



Aplikácia: Offshore konštrukcie

◆ Tandemové podtavivové zváranie

– Typický výkon odtavenia DC-AC

= 15 Kg/hr

– AC-AC s 25% DC klad.

= 20 Kg/hr

– 35 % zvýšenie produkcie



Aplikácia: Rúrovne

- ◆ Pozdĺžne zváranie rúr
- ◆ prechod 3-oblúkového zvárania na 4-oblúkové
- ◆ Rýchlosť zvýšená z 1.7 m/min na 2.3 m/min
- ◆ Netreba zmeniť tvar zvarovej húsenice alebo mechanické vlastnosti
- ◆ 35% zvýšenie produkcie



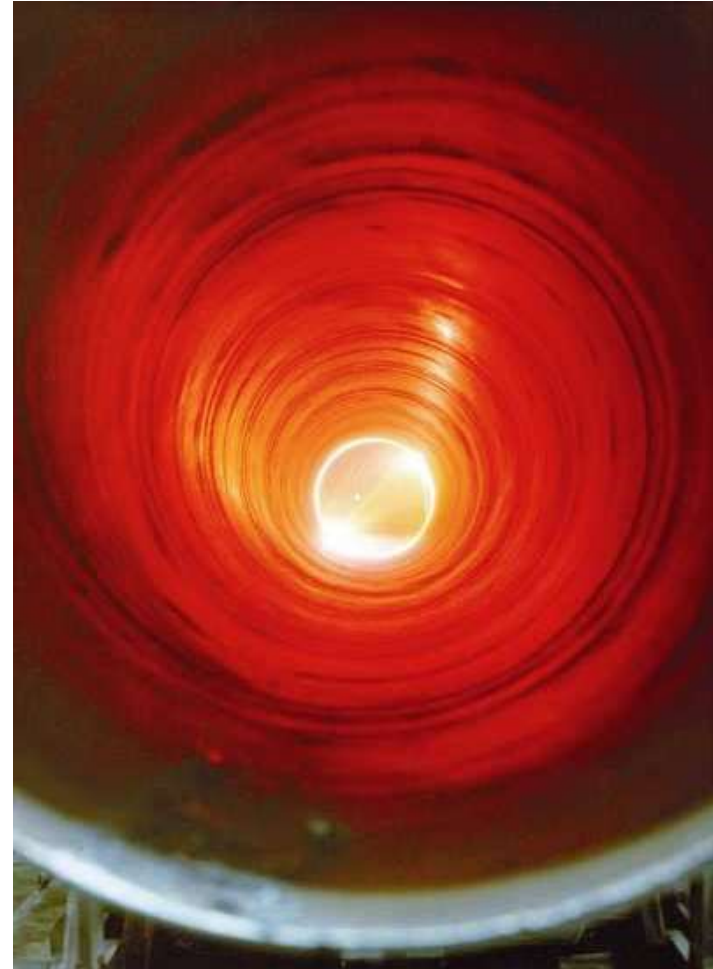
Aplikácia: Rúrovne

- ◆ Tandemový oblúk – PF 10A užívateľské rozhranie
 - ◆ excelentné zvýšenie produktivity ~ 30%



Aplikácia: Rúrovne

- ◆ **Zváranie špirálových rúr**
- ◆ DC-AC na AC-AC ID zvar
- ◆ Zvýšenie rýchlosti z 1.54 m/min na 1.90 m/min
- ◆ 23% zvýšenie produkcie
- ◆ vynikajúca ID kvalita zvaru



Aplikácia: obvodové zváranie



Aplikácia: Oprava lodného piestu

◆ ***Redukcia času z 22 hodín na 12 hodín***



Aplikácia: Oprava lodného piestu

Tandemový oblúk



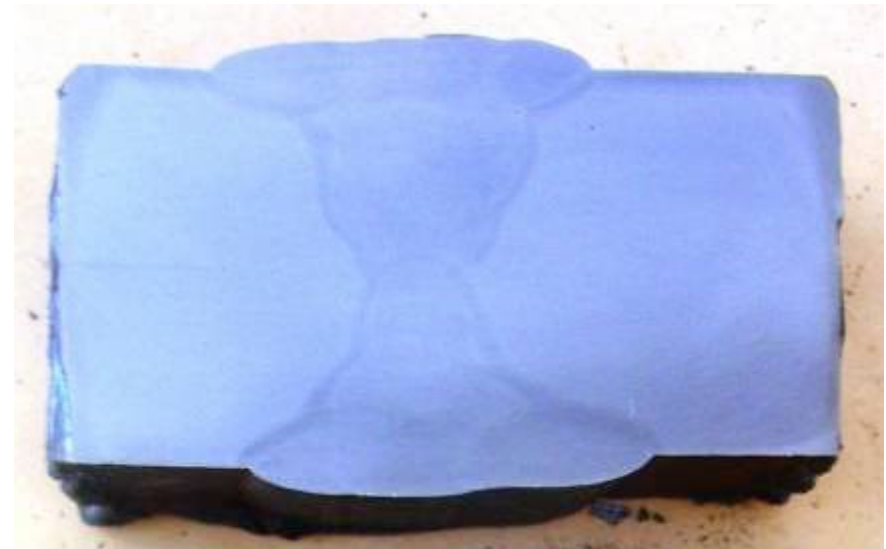
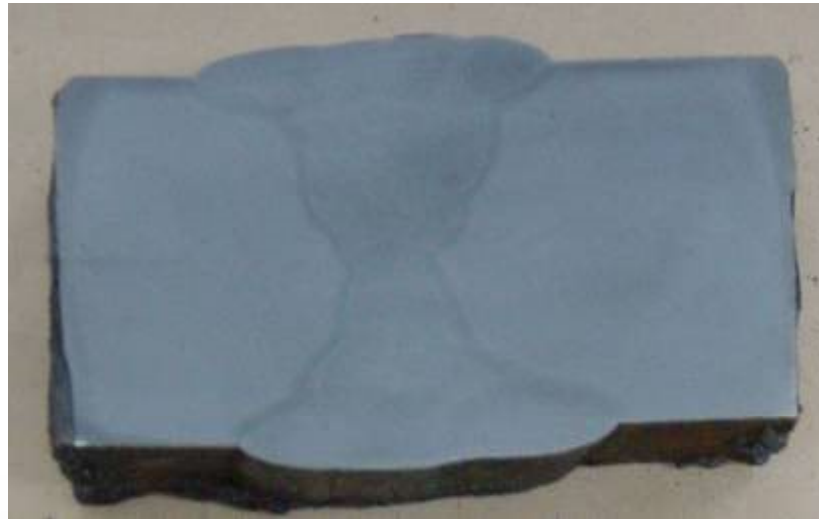
Aplikácia: Oprava lodného piestu

Tandemový oblúk



Aplikácia: Plný prievar

Nepotrebné drážkovanie koreňa



Aplikácia: Plný priedvar

Rúry – V – zvar



Aplikácie: okraje kotúčov



Aplikácia: Lodenice



Aplikácia: Lodenice



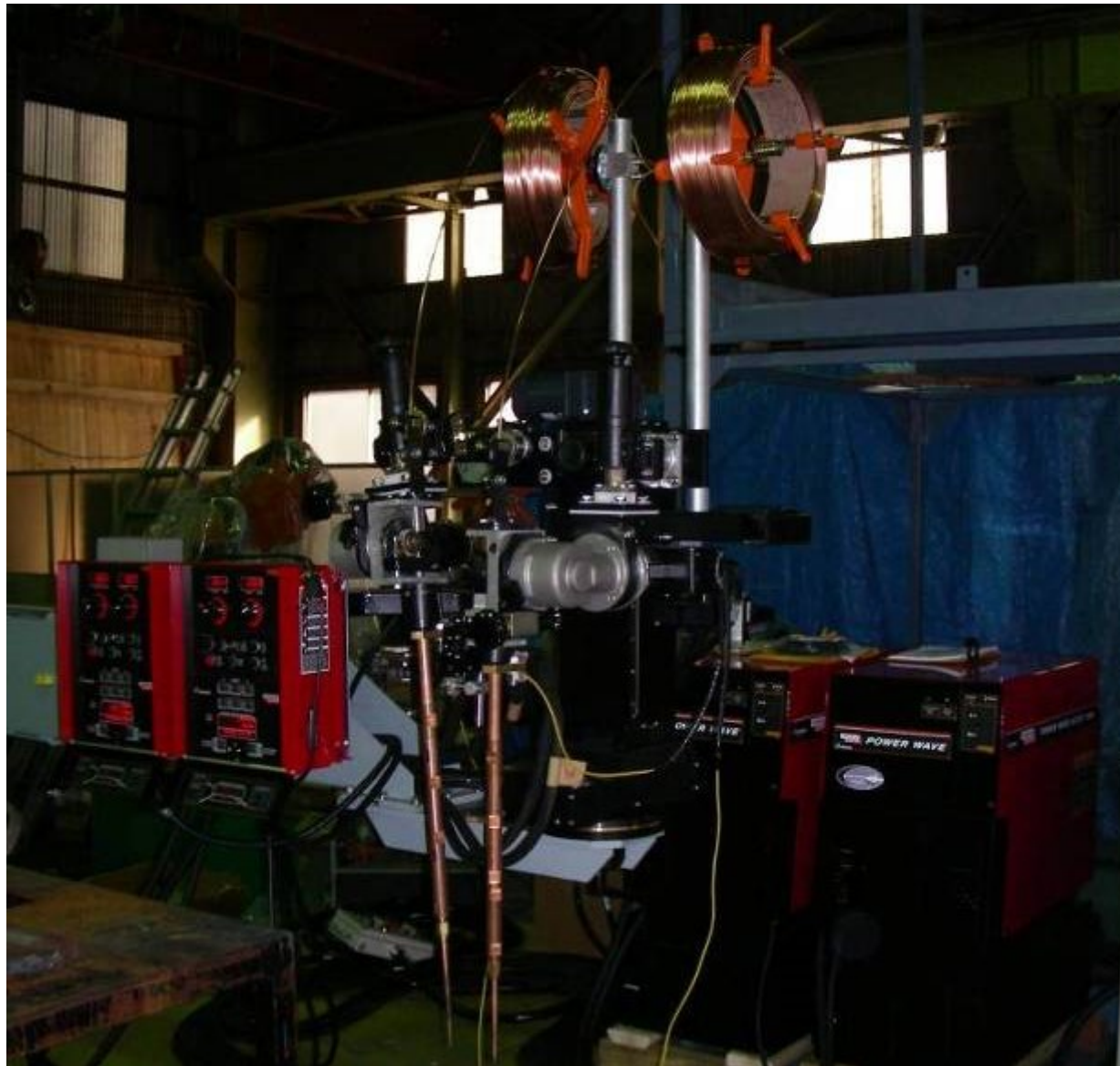
Aplikácie: Rúry / lamely



Aplikácie: Rúrovne



Aplikácie: hlboké drážky



Aplikácie: ocelové nosníky



Power Wave Update

Software Website



PowerWaveSoftware.com

A web resource exclusively
for fabricators who rely
on **Lincoln Electric** welding
equipment



**LINCOLN
ELECTRIC**
THE WELDING EXPERTSSM
www.PowerWaveSoftware.com

Enter Inside for:

- New Product Releases & Updates
- System Upgrades
- Weld Set Releases
- PC & Diagnostic Tools

PowerWave Software

Welding Library

*For instructions on how to upgrade your system please click [here](#)

Product Name SM	Weld Sets	Release Dates	Release Date
Power Wave 359M (ArcLink)	2511966	Click Here	May-05
Power Wave 455M (ArcLink)	2511973	Click Here	May-05
Power Wave 455M STT (ArcLink)	2511975	Click Here	May-05
Power Wave AC/DC 1000	252202K	Click Here	May-05

CE Models

Power Wave 409M (CE Model)	2541910C	Click Here	Jan-05
Power Wave 409M (CE Model)	2542010	Click Here	Jan-04
Power Wave 459M STT (CE Model)	2542021	Click Here	Jan-04

Please Note: Coming Soon, we will include individual sets. In the interim, the Weld Sets are included on the Operating System page in a bundled upgrade format. The Power Wave 359M, Power Wave 455M, and Power Wave 459M STT and the CE versions are included in the "Power Wave Software" upgrade.

The Welding Library offers a list of Lincoln Electric power sources and the Weld Set associated with each. Each Weld Set contains WaveSets that have been optimized for a process, consumable size, gas type, and range. A Release Date table is able to easily identify the correct welding WaveSets for your specific needs.

By selecting the Weld Set link (above), you launch a download of the interactive wizard that will upgrade your power source's Welding Library. The interactive System Update (SU) will walk you through a system review, a new release identification, a current system back-up and finally the upgrade of the system components.

Take advantage of improvements to your welding system quickly and easily.

PowerWave Software

Operating Systems

The Operating System resides within the system control board and controls the digital communication, the video drive motor, and the information displayed on the user interface.

In a Power Wave system, the information is always where you need it - in the hands of the operator. All of the information in the system is passed along a digital link to the user interface. Whether this is a control box, a robotic pendant, or a PLC, there is no need to go back to the power source to adjust parameters - A feature of digital technology.

In the event a new feature or function is added to the system, the aging process is simplified even further by a software upgrade. Conventional technology required hardware changes, new circuit boards, rewiring, or even a new machine!

With Power Wave systems Lincoln Electric can offer improvements and even to you in a software package that installs via an intelligent upgrade utility. The interactive System Update Utility will walk you through a system review, a new release identification, a current system back-up and finally the upgrade of the system components.

Take advantage of improvements to your welding system quickly and easily.

*For instructions on how to upgrade your system please click [here](#)

Current Software Release by Type of Welder	Release Date
Power Wave Software AC/DC Systems (All Models Except AC/DC)	Nov-05
Power Wave Software AC/DC 1000SM (Only)	Nov-05
Power WaveSM Systems	Nov-05
ArcLinkSM Systems	Nov-05

Note: The Power Wave System Updates are for ArcLink systems only (Power Wave 359M, Power Wave 459M, Power Wave 459M STT, Power Wave 409M and the Power Wave 455M are included with the "Power Wave Software" System Update. The standard production version is also included with each of these System Updates. Previous versions of machines, Power Wave Linchell and Power Wave 450 machines are not included in these bundled formats.

***Urob svoj ďalší zvar svojím najlepším
zvarom***