CD

STUD IN CONTACT WITH PLATE

CYCLE STARTS & CURRENT FLOWS

PROJECTION DISINTEGRATES & ARC ESTABLISHED

COMPLETED WELD

ARC

STUD IN CONTACT WITH PLATE

PILOT ARC

POWER ARC

COMPLETED WELD

CONWELD®

Speciality Fasteners for Stud Welding

STUD WELDING PRODUCTS

- CAPACITOR DISCHARGE STUDS
- SHORT CYCLE WELDING STUDS
- RIVETS & COLD FORGED ITEMS
- INSULATION PINS & CLIPS
- STUD WELDING COLLETS
- ARC WELDING STUDS
- CERAMIC FERRULES

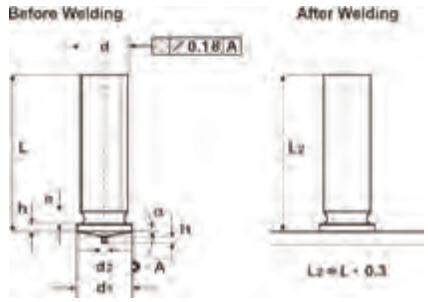

CERTIFICATE
The Certification Body
of TÜV South Asia Private Limited
certifies that
CONWELD ENGINEERING SERVICES
SHOP NO.17, RAJGURUNAGAR CO-OP INDUSTRIAL ESTATE,
T-106/2, T BLOCK, M.I.D.C, BHOSARI,
PUNE - 411026, INDIA
has established
and applies a Quality Management System for
Manufacture and Supply of Weld Studs & Rivets
An audit was performed, Report No. 20051561
Proof has been furnished that the requirements according to
ISO 9001 : 2000
are fulfilled. The certificate is valid until 2009-06-20
Certificate Registration No. 99 100 01348
Mumbai, 2006-06-21
ZERTIFIKAT ◆ CERTIFICATE ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT
CONWELD ENGINEERING SERVICES
Quality Policy
We all at CONWELD ENGINEERING SERVICES are committed to :
a. Achieve Total Customer Satisfaction by,
b. Manufacturing and Supplying of Consistent High Quality
WELD STUDS AND RIVETS and
c. Provide In Time Delivery.
We would strive to achieve this goal by continual improvement
in our processes, product quality, services and management systems
to exceed customer expectations.
1st December 2003
Mr. R. R. Tapkir
Chief Executive Officer

THREADED STUDS (EXTERNAL THREADED)

EN ISO 13918 : 1998

Material : Mild Steel Low Carbon / AISI-304 / AISI-316 / Al Mg_3

d	L + 0.6	d_1 ± 0.2	d_2 ± 0.08	l_1 ± 0.05	h	n max	L_2	α ± 1°
M3	s.table	4.5	0.65	0.55	0.7 - 1.4	1.5	~L-0.3	3°
M4	s.table	5.5	0.65	0.55	0.7 - 1.4	1.5	~L-0.3	3°
M5	s.table	6.5	0.75	0.8	0.7 - 1.4	2	~L-0.3	3°
M6	s.table	7.5	0.75	0.8	0.7 - 1.4	2	~L-0.3	3°
M8	s.table	9.0	0.82	0.9	0.7 - 1.4	2.5	~L-0.3	3°



PART NO.

Dx L	Mild Steel Low Carbon	AISI - 304 / 316	Al Mg_3
M3 x 5	CS - M - 03 - 0005	CS - S - 03 - 0005	CS - AL - 03 - 0005
6	CS - M - 03 - 0006	CS - S - 03 - 0006	CS - AL - 03 - 0006
7	CS - M - 03 - 0007	CS - S - 03 - 0007	CS - AL - 03 - 0007
8	CS - M - 03 - 0008	CS - S - 03 - 0008	CS - AL - 03 - 0008
10	CS - M - 03 - 0010	CS - S - 03 - 0010	CS - AL - 03 - 0010
12	CS - M - 03 - 0012	CS - S - 03 - 0012	CS - AL - 03 - 0012
15	CS - M - 03 - 0015	CS - S - 03 - 0015	CS - AL - 03 - 0015
16	CS - M - 03 - 0016	CS - S - 03 - 0016	CS - AL - 03 - 0016
20	CS - M - 03 - 0020	CS - S - 03 - 0020	CS - AL - 03 - 0020
25	CS - M - 03 - 0025	CS - S - 03 - 0025	CS - AL - 03 - 0025
30	CS - M - 03 - 0030	CS - S - 03 - 0030	CS - AL - 03 - 0030
35	CS - M - 03 - 0035	CS - S - 03 - 0035	CS - AL - 03 - 0035
M4 x 6	CS - M - 04 - 0006	CS - S - 04 - 0006	CS - AL - 04 - 0006
8	CS - M - 04 - 0008	CS - S - 04 - 0008	CS - AL - 04 - 0008
10	CS - M - 04 - 0010	CS - S - 04 - 0010	CS - AL - 04 - 0010
12	CS - M - 04 - 0012	CS - S - 04 - 0012	CS - AL - 04 - 0012
15	CS - M - 04 - 0015	CS - S - 04 - 0015	CS - AL - 04 - 0015
16	CS - M - 04 - 0016	CS - S - 04 - 0016	CS - AL - 04 - 0016
20	CS - M - 04 - 0020	CS - S - 04 - 0020	CS - AL - 04 - 0020
25	CS - M - 04 - 0025	CS - S - 04 - 0025	CS - AL - 04 - 0025
30	CS - M - 04 - 0030	CS - S - 04 - 0030	CS - AL - 04 - 0030
35	CS - M - 04 - 0035	CS - S - 04 - 0035	CS - AL - 04 - 0035
40	CS - M - 04 - 0040	CS - S - 04 - 0040	CS - AL - 04 - 0040
45	CS - M - 04 - 0045	CS - S - 04 - 0045	CS - AL - 04 - 0045

Dx L	Mild Steel Low Carbon	AISI - 304 / 316	Al Mg_3
M5 x 8	CS - M - 05 - 0008	CS - S - 05 - 0008	CS - AL - 05 - 0008
10	CS - M - 05 - 0010	CS - S - 05 - 0010	CS - AL - 05 - 0010
12	CS - M - 05 - 0012	CS - S - 05 - 0012	CS - AL - 05 - 0012
15	CS - M - 05 - 0015	CS - S - 05 - 0015	CS - AL - 05 - 0015
16	CS - M - 05 - 0016	CS - S - 05 - 0016	CS - AL - 05 - 0016
20	CS - M - 05 - 0020	CS - S - 05 - 0020	CS - AL - 05 - 0020
25	CS - M - 05 - 0025	CS - S - 05 - 0025	CS - AL - 05 - 0025
30	CS - M - 05 - 0030	CS - S - 05 - 0030	CS - AL - 05 - 0030
35	CS - M - 05 - 0035	CS - S - 05 - 0035	CS - AL - 05 - 0035
40	CS - M - 05 - 0040	CS - S - 05 - 0040	CS - AL - 05 - 0040
M6 x 8	CS - M - 06 - 0008	CS - S - 06 - 0008	CS - AL - 06 - 0008
10	CS - M - 06 - 0010	CS - S - 06 - 0010	CS - AL - 06 - 0010
12	CS - M - 06 - 0012	CS - S - 06 - 0012	CS - AL - 06 - 0012
15	CS - M - 06 - 0015	CS - S - 06 - 0015	CS - AL - 06 - 0015
16	CS - M - 06 - 0016	CS - S - 06 - 0016	CS - AL - 06 - 0016
20	CS - M - 06 - 0020	CS - S - 06 - 0020	CS - AL - 06 - 0020
25	CS - M - 06 - 0025	CS - S - 06 - 0025	CS - AL - 06 - 0025
30	CS - M - 06 - 0030	CS - S - 06 - 0030	CS - AL - 06 - 0030
35	CS - M - 06 - 0035	CS - S - 06 - 0035	CS - AL - 06 - 0035
40	CS - M - 06 - 0040	CS - S - 06 - 0040	CS - AL - 06 - 0040
45	CS - M - 06 - 0045	CS - S - 06 - 0045	CS - AL - 06 - 0045
50	CS - M - 06 - 0050	CS - S - 06 - 0050	CS - AL - 06 - 0050

THREADED STUDS (EXTERNAL THREADED) — EN ISO 13918 : 1998

PART NO.

Dx L	Mild Steel Low Carbon	AISI - 304 / 316	Al Mg_3
M8 x 10	CS - M - 08 - 0010	CS - S - 08 - 0010	CS - AL - 08 - 0010
12	CS - M - 08 - 0012	CS - S - 08 - 0012	CS - AL - 08 - 0012
15	CS - M - 08 - 0015	CS - S - 08 - 0015	CS - AL - 08 - 0015
16	CS - M - 08 - 0016	CS - S - 08 - 0016	CS - AL - 08 - 0016
20	CS - M - 08 - 0020	CS - S - 08 - 0020	CS - AL - 08 - 0020
25	CS - M - 08 - 0025	CS - S - 08 - 0025	CS - AL - 08 - 0025
30	CS - M - 08 - 0030	CS - S - 08 - 0030	CS - AL - 08 - 0030
35	CS - M - 08 - 0035	CS - S - 08 - 0035	CS - AL - 08 - 0035
40	CS - M - 08 - 0040	CS - S - 08 - 0040	CS - AL - 08 - 0040
45	CS - M - 08 - 0045	CS - S - 08 - 0045	CS - AL - 08 - 0045
50	CS - M - 08 - 0050	CS - S - 08 - 0050	CS - AL - 08 - 0050
55	CS - M - 08 - 0055	CS - S - 08 - 0055	CS - AL - 08 - 0055

THREADED STUDS (INTERNAL THREADED) (EN ISO 13918 : 1998)

Material : Mild Steel Low Carbon / AISI-304 / Al Mg_3

d_1 +/- 0.1	d_2	l_1 +0.6 0	b +0.5 0	d_3 +/- 0.2	d_4 +/- 0.08	h
5	M3	s.table	5	6,5	0,75	0.7 bis 1,4
6	M4	s.table	6	7,5	0,75	0.7 bis 1,4
7,1	M5	s.table	7,5	9,0	0,80	0.8 bis 1,4
8	M6	s.table	9	9,0	0,80	0.8 bis 1,4

INSULATION PINS AND CLIPS (EN ISO 13918 : 1998)

PART NO.

Dx L	Mild Steel Copper Coated
2.0 x 20	CS - MN - 02 - 0020
30	CS - MN - 02 - 0030
40	CS - MN - 02 - 0040
50	CS - MN - 02 - 0050
60	CS - MN - 02 - 0060
3.0 x 20	CS - MN - 03 - 0020
30	CS - MN - 03 - 0030
40	CS - MN - 03 - 0040
50	CS - MN - 03 - 0050
60	CS - MN - 03 - 0060
70	CS - MN - 03 - 0070
80	CS - MN - 03 - 0080
90	CS - MN - 03 - 0090
100	CS - MN - 03 - 0100

d_2	L (mm)
2	20 - 060
3	20 - 100
4	20 - 100

Dx L	Mild Steel Copper Coated
4.0 x 20	CS - MN - 04 - 0020
30	CS - MN - 04 - 0030
40	CS - MN - 04 - 0040
50	CS - MN - 04 - 0050
60	CS - MN - 04 - 0060
70	CS - MN - 04 - 0070
80	CS - MN - 04 - 0080
90	CS - MN - 04 - 0090
100	CS - MN - 04 - 0100

STUD WELDING COLLETS

Copper Alloy Collets
for CD Welding
Available in Sizes : M3, M4, M5, M6, M8, M10

Length - 40 mm Up To 300 mm

CAPACITOR DISCHARGE STUD WELDING

What It Does

The welding of fasteners to light-gauge metals demands a system which minimizes the depth of penetration of the weld. The Capacitor Discharge range of studs, which has been specially developed for this purpose has found increasing application in almost every type of sheet-metal fabrication, in many cases providing a spectacular cost saving over alternative production processes.

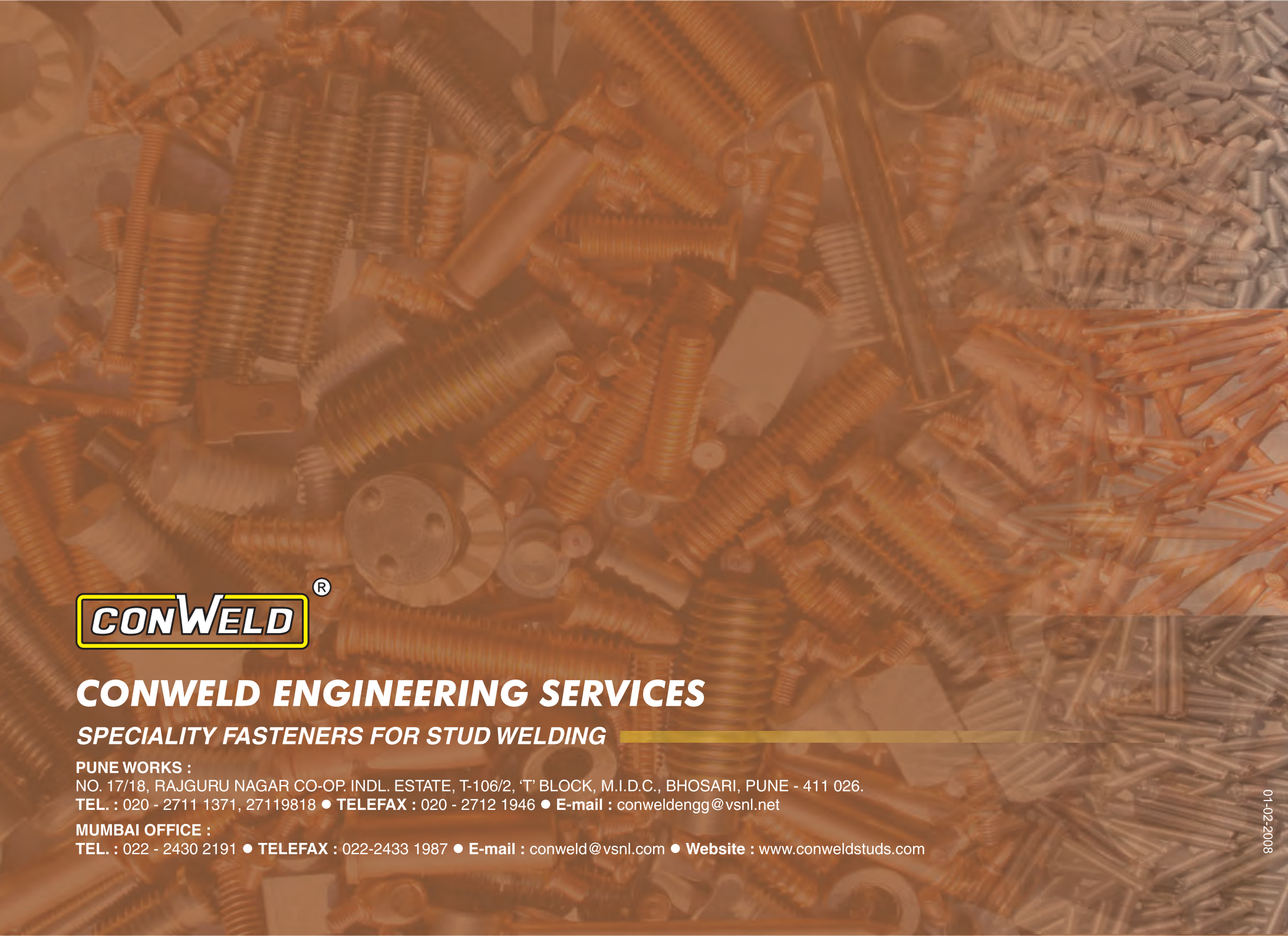
Employing a weld time cycle of less than 1/100th of a second so that only the outer skin of the component/job and the end of the stud are melted, results in a shallow but nonetheless strong weld. Consistent results are obtained in a wide range of materials, even on vert light-gauge sheet, low-carbon and stainless steels down to 26 gauge and all weldable non-ferrous materials down to 22 gauge. In most cases, the reverse face can be pre-finished by painting, plastic coating, plating or anodizing, before welding, without fear of heat damage.

How It Works

In capacitor discharge stud welding, the welding energy is obtained from banks of capacitors which have previously been charged to the voltage selected for the particular application. Energy is discharged through the stud itself, giving a high density current which disintegrates the small pip/projection on the base of the stud. This leaves an ionized gap between stud and work piece across which the welding current continues to flow, in the form of work piece, completing the weld. The system operates on a single-phase 50 Hz A.C. mains supply at 220/240 volts.

Practical Advantages

- **Saves Time :** A stud weld takes only a split-second to make and only two-three seconds to re-load the welding tool/gun. Auto-feeding options are also available.
- **Saves Material :** The component to which the fasteners are welded is not weakened by drilling - as a result, plate thickness can be reduced. In addition, this process alleviates the need for punching holes and what's more - the reverse face of the component can be painted or covered as there is no rear side marking.
- **Saves Labour :** Semi-skilled operators too can quickly learn to make perfect stud welds... consistently.
- **Increases Design and Production Flexibility :** Access is only necessary from one side of the job - the equipment is readily portable and may even be bench-mounted. The designer has greater freedom and this production flexibility, with special auto-feeding studs, makes it possible to have methods of assembly that would otherwise be impractical.
- **Product Quality :** Provides leak proof fastening. Leaves a smooth unbroken finish on the rear/reverse side of the component or fabrication.
- **Wider Choice of Metals :** Dis-similar metals can be welded as long as both are conductive, e.g. brass to steel, brass to copper, aluminium to die-cast zinc.



CONWELD®

CONWELD ENGINEERING SERVICES

SPECIALITY FASTENERS FOR STUD WELDING

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TEL. : 022 - 2430 2191 ● **TELEFAX :** 022-2433 1987 ● **E-mail :** conweld@vsnl.com ● **Website :** www.conweldstuds.com

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