

# Innovation



**is our strength !**

# 7xxx Alloys



# High Strength

Erbslöh  
Aluminium GmbH

Example: DISPAL S790\* (AlZn11Mg2,3Cu1,1CrZr)

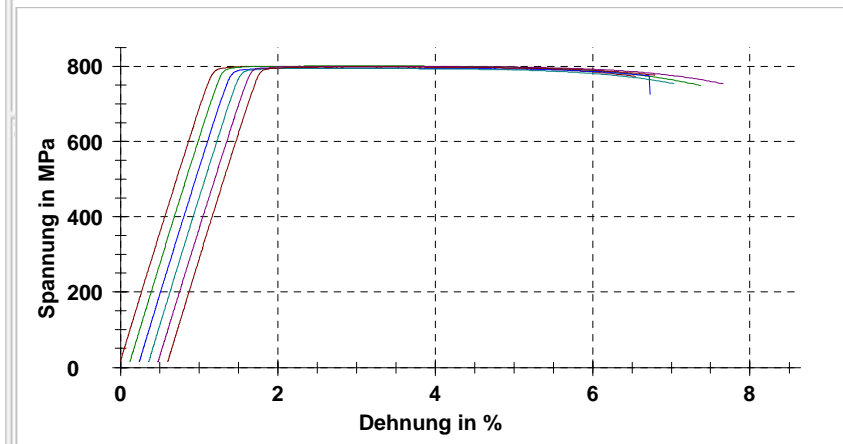
Nächste Probe: Zwingende Eingaben

Durchmesser d0

Härte [HV]

Bemerkung

Bezeichnung der Unterserie



Legende	Nr	E-Modul GPa	Rp 0,2 MPa	Rm MPa	A %	Härte HV N/mm²	S0 mm²	Bruchstelle
■	1	69	795	800	5,46	238	28,69	Mitte
■	2	69	796	800	6,19	238	28,70	Mitte
■	3	69	790	795	5,46	234	28,70	Mitte
■	4	69	790	794	5,60	233	28,70	Mitte
■	5	68	795	799	6,10	238	28,68	Mitte
■	6	69	794	798	5,08	238	28,70	Mitte

S790	E-Modul GPa	Rp 0,2 MPa	Rm MPa	A %	Härte HV N/mm²
n = 6					
X quer	69	793	798	5,65	237
s	0	3	3	0,42	2
X quer - 3s	68	786	789	4,38	229
min	68	790	794	5,08	233
max	69	796	800	6,19	238
R	1	6	7	1,11	5

Nächste Probe: Eingabeaufforderung

Bruch Mitte

Bruchstel

\* DISPAL® S790 by Osprey, Profile Ø 11, Deformation Ratio (D) 1:25, Direct Extrusion, Heat Treatment T6

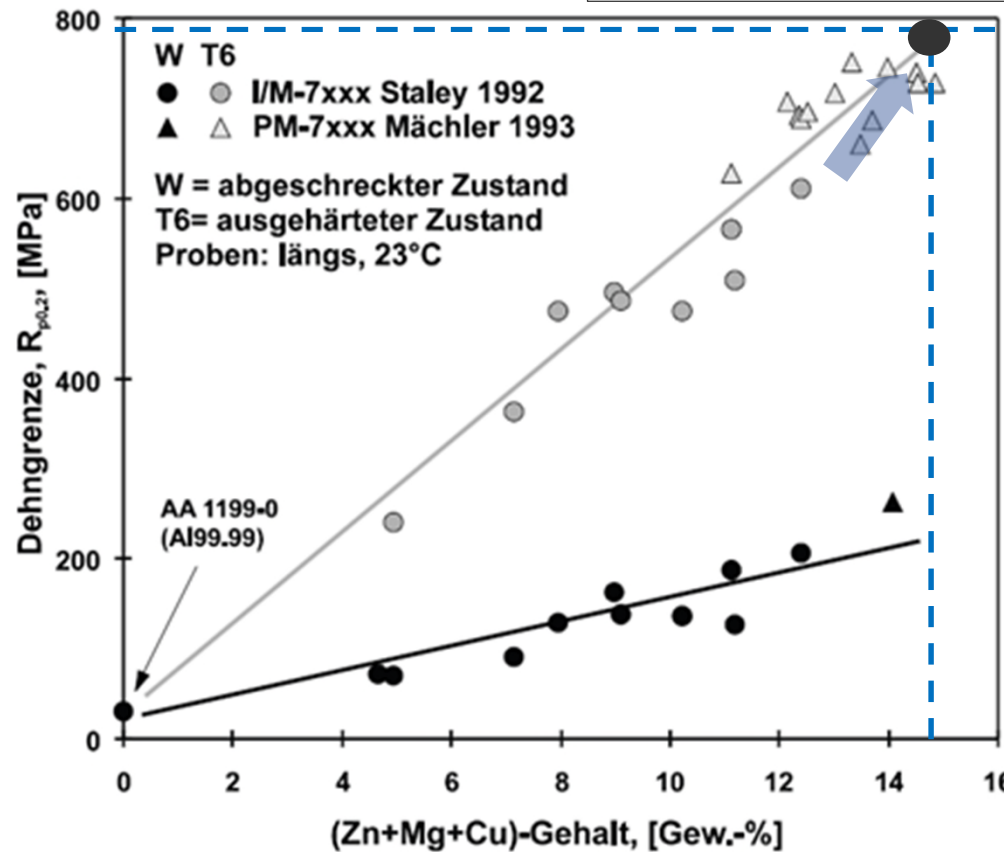
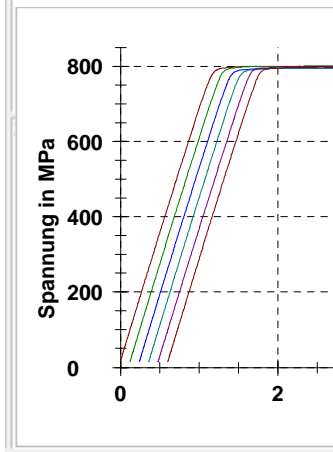
# High Strength

Example: DISPAL S790\* (AlZn11Mg2,3Cu1,1CrZr)

## DISPAL S790\* highest strength

Nächste Probe: Zwingende Eingaben

- Durchmesser d0
- Härte [HV]
- Bemerkung
- Bezeichnung der Unter



rte HV S0 Bruchstelle

/mm <sup>2</sup>	mm <sup>2</sup>	
238	28,69	Mitte
238	28,70	Mitte
234	28,70	Mitte
233	28,70	Mitte
238	28,68	Mitte
238	28,70	Mitte

Nächste Probe: Eingabeaufforderung

Bruch Mitte

1

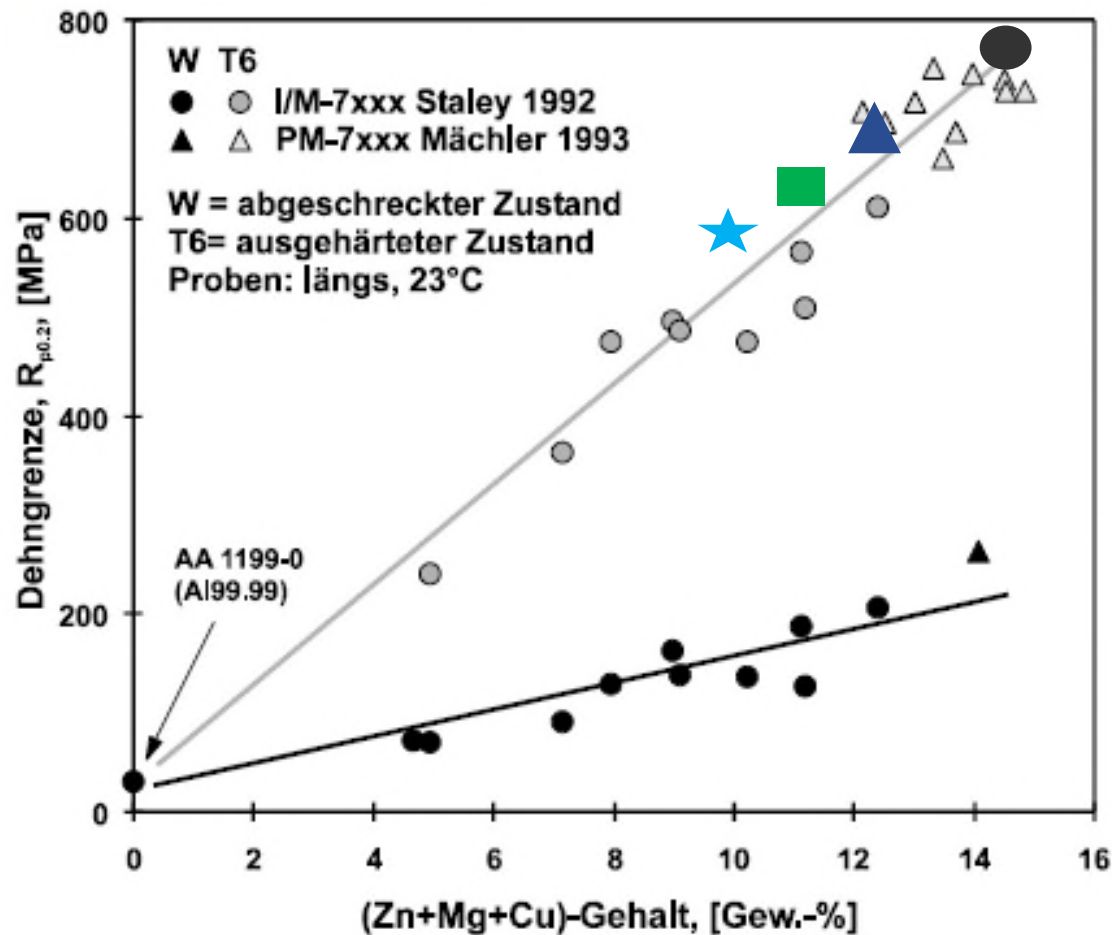
Bruchstel Mitte

\* DISPAL® S790, by Osprey,

## DISPAL S7075 Project

Thesis for increasing strength S7075 PM with Zn (5.6% => 8%)

### • Al-Zn



Example DISPAL S790 ●  
(AlZn11Mg2Cu1CrZr)

- max. Strength in combination with good elongation and fracture toughness

#### Disadvantage:

- Possible difficulties in case of spray compaction process due to. high content of Zn (>> 8%) makes problems in case of exhaust system and filter.

#### Target of new S7075 alloy:

- Reduced Zn content ( $\leq 8\%$ ) in combination with high strength and nearly isotropic properties, higher than known for conventional 7075-alloys.

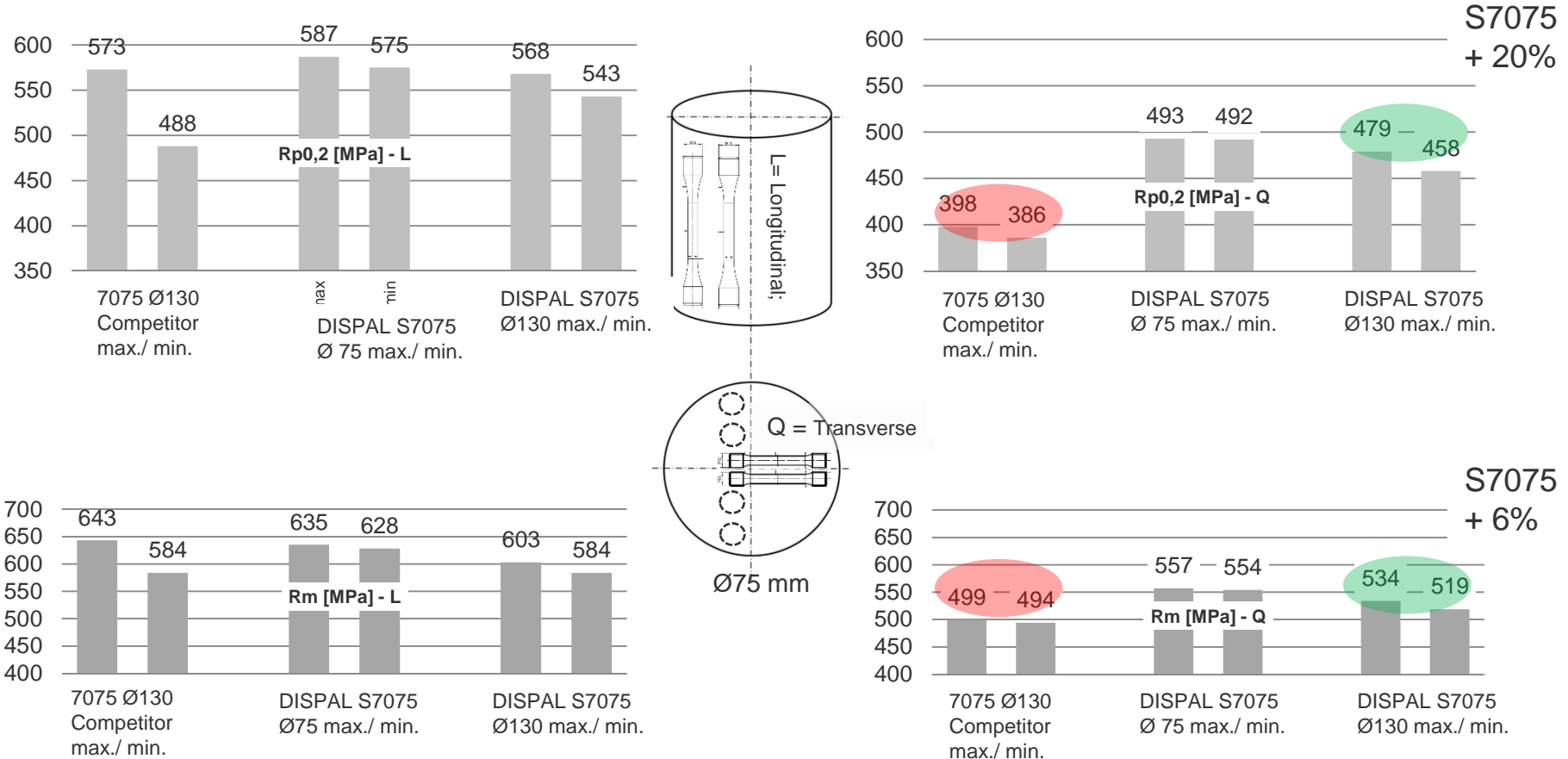
▲ AlZn8Mg2,5Cu1,8

■ AlZn6,8Mg2,5Cu1,8 (interp.)

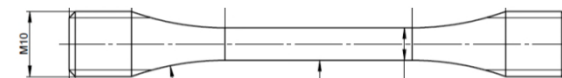
★ AlZn5,6Mg2,5Cu1,8

# DISPAL S7075 (AlZn5,6Mg2,5Cu1,8)

Tensile test @RT, DISPAL S7075 T6 Ø75/130 mm vs. Competitor 7075 T6511 Ø 130 mm:

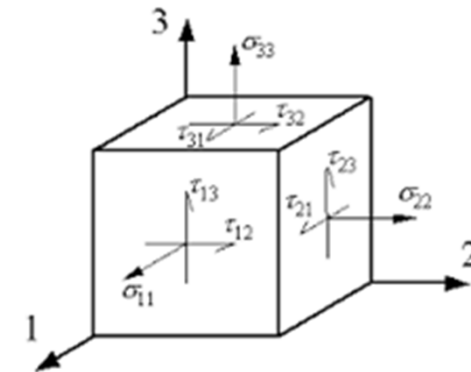
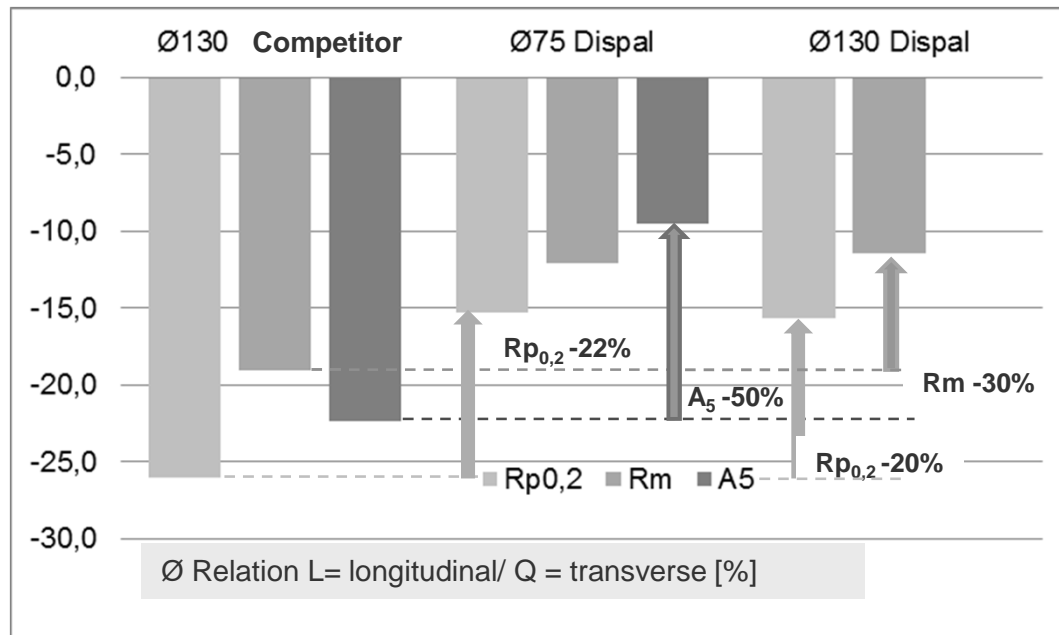


Extruded Condition. L= Logitudinal; Q = Transverse. First values.  
Competitor Ø 130 mm, D = 1:10, max. Values/ min. Values  
EAL Ø 75 mm, D = 1:16, max. Values/ min. Values

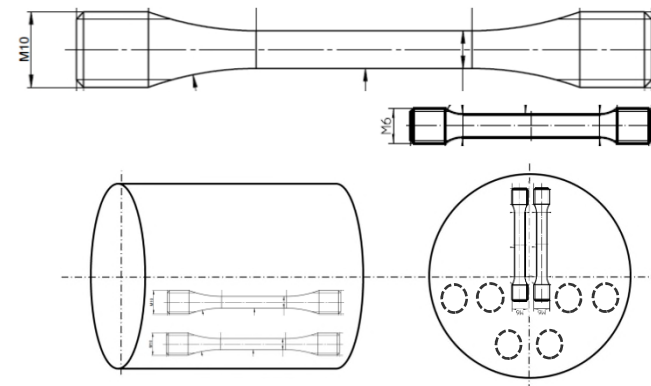


# DISPAL S7075 (AlZn5,6Mg2,5Cu1,8) Project

Tensile test @RT, DISPAL S7075 T6 Ø75/ 130 mm vs. Competitor 7075 T6511 Ø 130 mm:



Improved isotropic behaviour  
for spray compacted S7075



Extruded Condition. L= Logitudinal; Q = Transverse. First values.  
 Competitor Ø 130 mm, D = 1:10, max. Values/ min. Values  
 EAL Ø 75 mm, D = 1:16, max. Values/ min. Values

## Your Contact at Erbslöh:

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