

Lampiran 1

- Hasil perhitungan dengan menggunakan Software Minitab material ST37

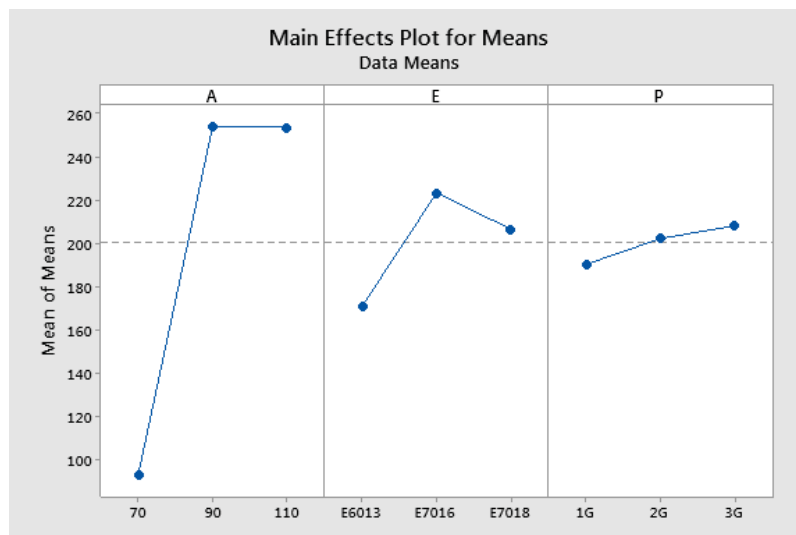
Response Table for Means

| Level | A | E | P |
|-------|--------|--------|--------|
| 1 | 92,81 | 170,94 | 190,32 |
| 2 | 254,22 | 223,38 | 202,32 |
| 3 | 253,86 | 206,57 | 208,25 |
| Delta | 161,42 | 52,44 | 17,93 |
| Rank | 1 | 2 | 3 |

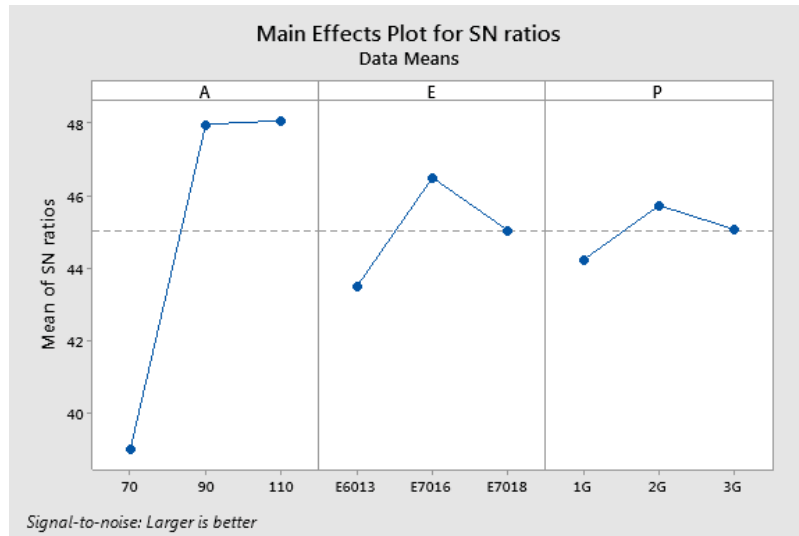
Response Table for Signal to Noise Ratios

Larger is better

| Level | A | E | P |
|-------|-------|-------|-------|
| 1 | 38,98 | 43,49 | 44,23 |
| 2 | 47,97 | 46,50 | 45,73 |
| 3 | 48,07 | 45,04 | 45,07 |
| Delta | 9,09 | 3,01 | 1,50 |
| Rank | 1 | 2 | 3 |



Grafik rata-rata uji tarik material ST37



Grafik rata-rata S/N Ratio material ST37

- Hasil perhitungan menggunakan Software Minitab untuk material ASTM A36

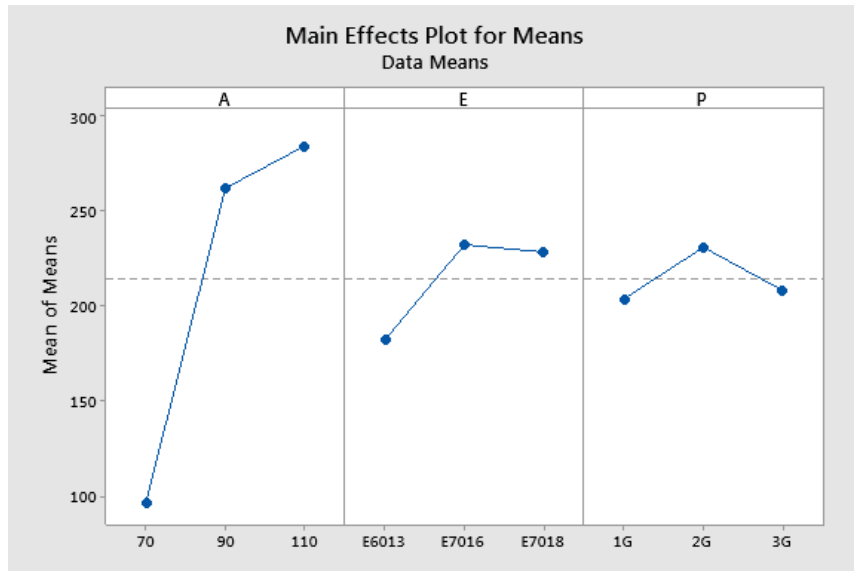
Response Table for Means

| Level | A | E | P |
|-------|--------|--------|--------|
| 1 | 96,43 | 182,16 | 203,82 |
| 2 | 262,13 | 232,31 | 230,95 |
| 3 | 284,38 | 228,47 | 208,17 |
| Delta | 187,95 | 50,15 | 27,13 |
| Rank | 1 | 2 | 3 |

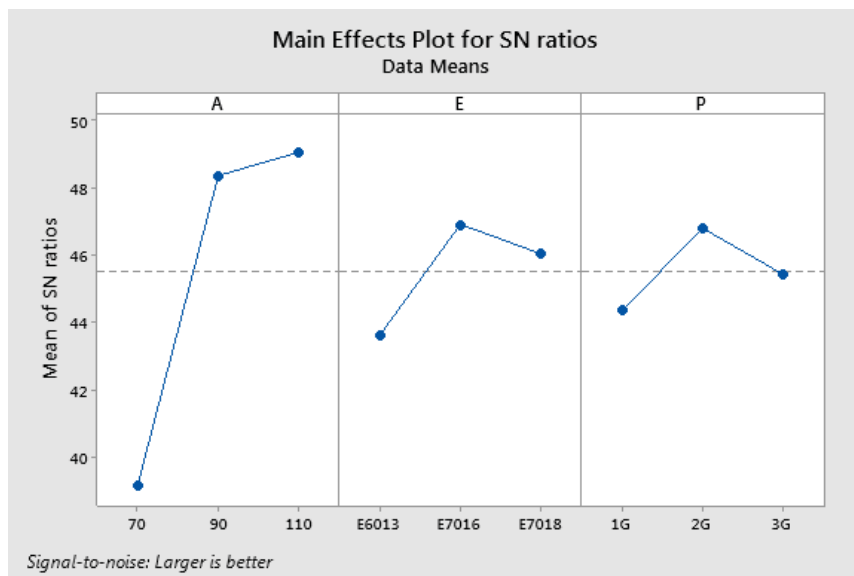
Response Table for Signal to Noise Ratios

Larger is better

| Level | A | E | P |
|-------|-------|-------|-------|
| 1 | 39,15 | 43,61 | 44,34 |
| 2 | 48,34 | 46,90 | 46,78 |
| 3 | 49,04 | 46,02 | 45,41 |
| Delta | 9,89 | 3,29 | 2,45 |
| Rank | 1 | 2 | 3 |



Grafik rata-rata uji tarik material ASTM A36



Grafik rata-rata S/N Ratio material ASTM A36

Lampiran 2



Material uji tarik ST37



Material uji tarik A36

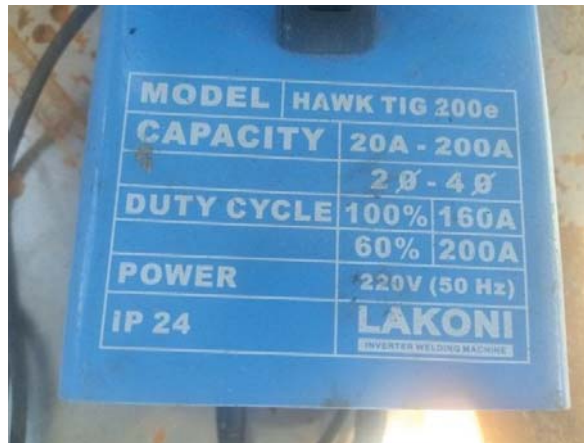


Pembentukan kampuh V

Lampiran 3



Mesin las yang digunakan



Spesifikasi mesin las



Elektroda E6013



Elektroda 7016



Elektroda 7018

Lampiran 4



Proses pengelasan



posisi pengelasan *down-hand* (1G)



Posisi pengelasan horisontal (2G)



Posisi pengelasan vertikal (3G)



Setelah dilakukan pengelasan



Spesimen uji tarik



Spesimen uji tarik ST37



Spesimen uji tarik ASTM A36



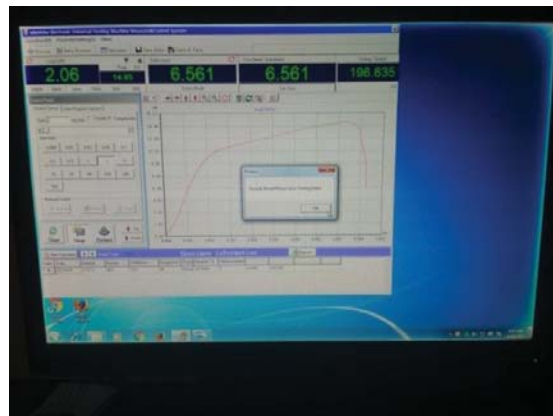
Mesin uji tarik



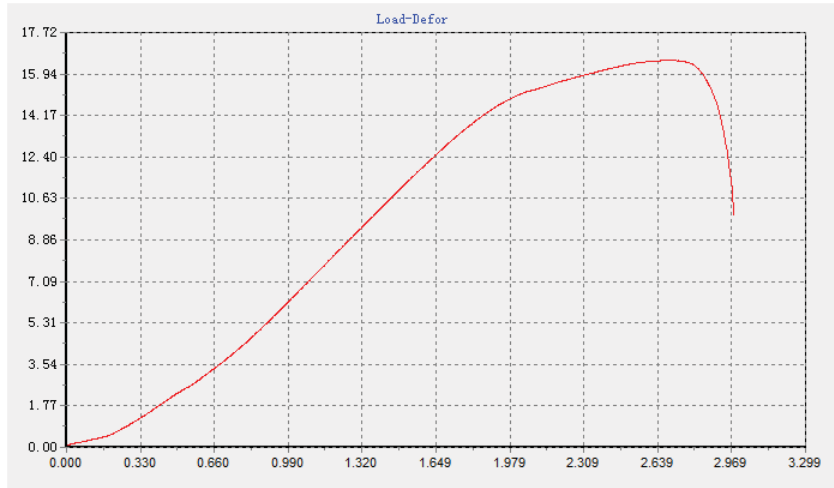
Spesifikasi mesin uji yang digunakan



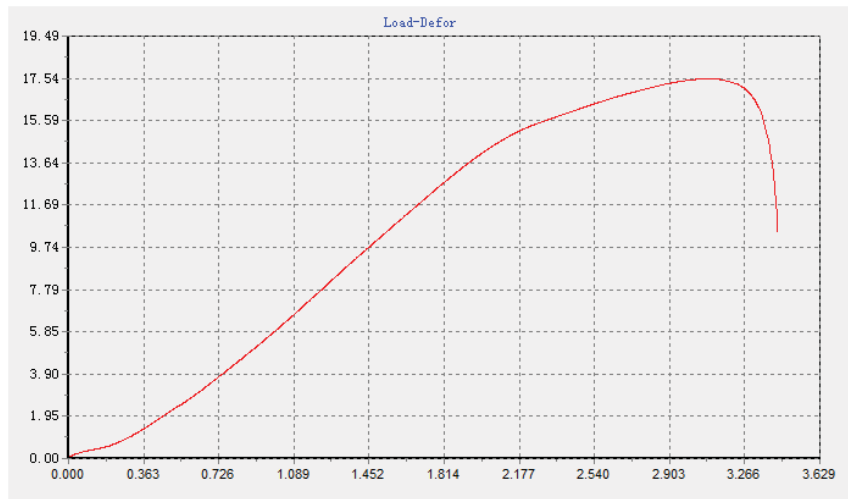
Proses pengujian



Tampilan layar komputer mesin uji



Grafik hasil pengujian material ST37



Grafik hasil pengujian material ASTM A36