

## DAFTAR PUSTAKA

Harsno wilyosumarto, Toshi Okumura, Teknologi Pengelasan Logam,  
PT.Pradnya Paramita Jl. Kebon Sirih 46.Jakarta.

Welding Institut of Canada, 1981. *Basic Welding Metallurgy of Structur Steels*.

ASM, Metal Hand Book Vol.11, 5<sup>th</sup> Printing, *Failure Analysis and  
Prevention,American Society for Metal*,1995.

ASM,Metal Hand Book, Vol 7, Edition 8<sup>th</sup>,*Atlas of Microstructures of Industrial  
Alloys*.

Suryo Hapsoro Tri Utomo,2009 Jalan rel, Beta Offset

W.F. Smith, "Surdia T. & Sato S., " *Pengetahuan Bahan Teknik*", PT. Pradnya  
Paramita, Jakarta, 1992.

Utakatikotak 2016, sejarah kereta api, termuat di :  
[https://m.utakatikotak.com/kongkow/detail/5177/Penemu-Kereta-Api-  
William-Murdoch#](https://m.utakatikotak.com/kongkow/detail/5177/Penemu-Kereta-Api-William-Murdoch#) diakses 19 oktober 2020

Yusronyoga 2020, thermal welding (pengelasan termit), termuat di :  
[https://www.yusronsayoga.com/2020/07/thermal-welding-pengelasan-  
thermit-pada-rel-kereta-  
api.html#:~:text=Pengelasan%20termit%20adalah%20proses%20menyalaka  
n,logam%20untuk%20membentuk%20sambungan%20las.](https://www.yusronsayoga.com/2020/07/thermal-welding-pengelasan-thermit-pada-rel-kereta-api.html#:~:text=Pengelasan%20termit%20adalah%20proses%20menyalakan,logam%20untuk%20membentuk%20sambungan%20las.) Diakses 19  
oktober 2020

Ilmutekniksipil 2020, komponen penyusun rel kereta api, termuat di :  
[https://www.ilmutekniksipil.com/teknik-lalulintas/komponen-penyusun-rel-  
kereta-api](https://www.ilmutekniksipil.com/teknik-lalulintas/komponen-penyusun-rel-kereta-api) diakses 21 oktober 2020

Ejournal undip 2006, prosesmetalurgi las, termuat di :  
<https://ejournal.undip.ac.id/index.php/kapal/article/download/2638/2359>  
diakses 23 oktober 2020

Materialcerdas 2009, uji SEM dan EDS, termuat di :  
<https://materialcerdas.wordpress.com/teori-dasar/scanning-electron-microscopy/#commentform> diakses 11 november 2020