ABSTRACT

EGW process has been applied to joining of ship block with vertical-up position at high production rate. The workability of EGW, however, has been interrupted by too much slag production. Two electrodes EGW showed more severe workability than that of one electrode EGW. Therefore, to understand the effect of discharge amount of EGW slag on workability and mechanical properties, two different slag discharge amount have been controlled at the same welding conditions. The results are as follows:

1) Workability has been improved by any additional slag discharge.
2) Mechanical properties have been deteriorated with any additional slag discharge.
3) Chemical compositions of weld metal have been changed by any additional slag discharge.