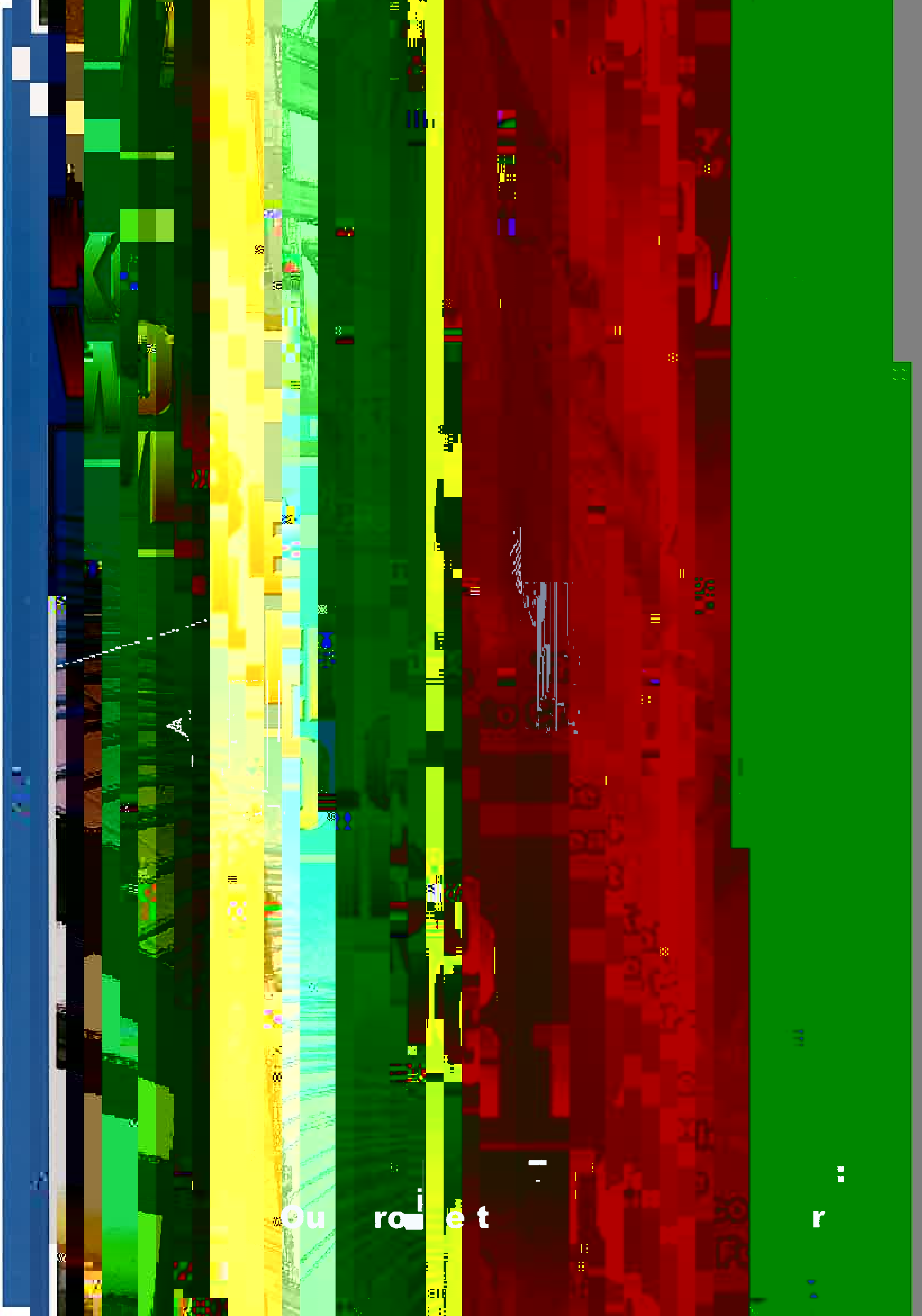

A Wide Span of Steel Grades are Used

Ship class grades of steels used for offshore structures vary depending on the type of structure and the service conditions. Fixed platforms use high tensile strength steel tubular products with yield strengths of 350, 400, 420 and 500 MPa for the jacket. Jackets are fabricated with thick-section tubular steels ranging from, for example, 40 to 90 mm and, for a large jacket, over 100 mm. Jack-up rigs use high tensile strength steels with yield strengths of 500, 550 and 690 MPa for legs with thick sections reaching, for rack-to-rack joints, approximately 130 mm. The structural components of semi-submergible rigs use mainly mild steel and high tensile strength steel with yield strength of 350 MPa.

Offshore Structures Require Higher Quality for Welded Joints

In the fabrication of offshore structures, welding is Ith t.9(ucture<029f>ket17 Tm /Cs c2041[(Ith ts)]37 of of)204use (s ipecifes, welDe and the sercket-5 c4647xample

Tensile strength (MPa)		490 min	520 min	550 min	610 min	670 min	770 min
Yield strength (MPa)		350 min	400 min	420 min	500 min	550 min	690 min
Impact Energy (J)		35 min	40 min	42 min	50 min	55 min	69 min
Service temperature (°C)	−20	**LB-52** (AC, DCEP, SR) **LB-52A** (AC, DCEP, SR)	**LB-57** (AC, DCEP, SR)	**LB-62UL** (AC, DCEP, SR) **0886,0957,**			

Kobelco Welding of America Inc. (KWAI) is pleased