

Table 1 parameters of *Chaboche* model

$Q_{\infty}/$ MPa	b	C_1/MPa	γ_1	C_2/MPa	γ_2	C_3/MPa	γ_3	C_4/MPa	γ_4
21	1.2	7993	175	6773	116	2854	34	1450	29

Table 2 Parameters of double ellipsoid heat source function

Parameter	U-rib - roof joint	U-rib - diaphragm joint
Length of the front axle a_1/mm	3	6
Length of the front rear a_2/mm	5	14
b/mm	10	8
c/mm	18	5
Welding speed $/\text{mm} \cdot \text{s}^{-1}$	10	10
Welding voltage U/v	350	250
Welding current I/A	35	25