Abstract

This is the second paper in a series of papers analyzing angled crested like water waves with surface tension. We consider the 2D capillary gravity water wave equation and assume that the fluid is inviscid, incompressible, irrotational and the air density is zero. In the first paper we constructed a weighted energy which generalizes the energy of Kinsey and Wu to the case of non-zero surface tension, and proved a local wellposedness result. In this paper we prove that under a suitable scaling regime, the zero surface tension limit of these solutions with surface tension are solutions to the gravity water wave equation which includes waves with angled crests.