3.1.4. classification

a. progressive wave: wave is moving through (or across the surface of) the media
standing wave : sum of two progressive waves of equal dimensions, but travelling in opposite directions

b. surface wave and internal wave

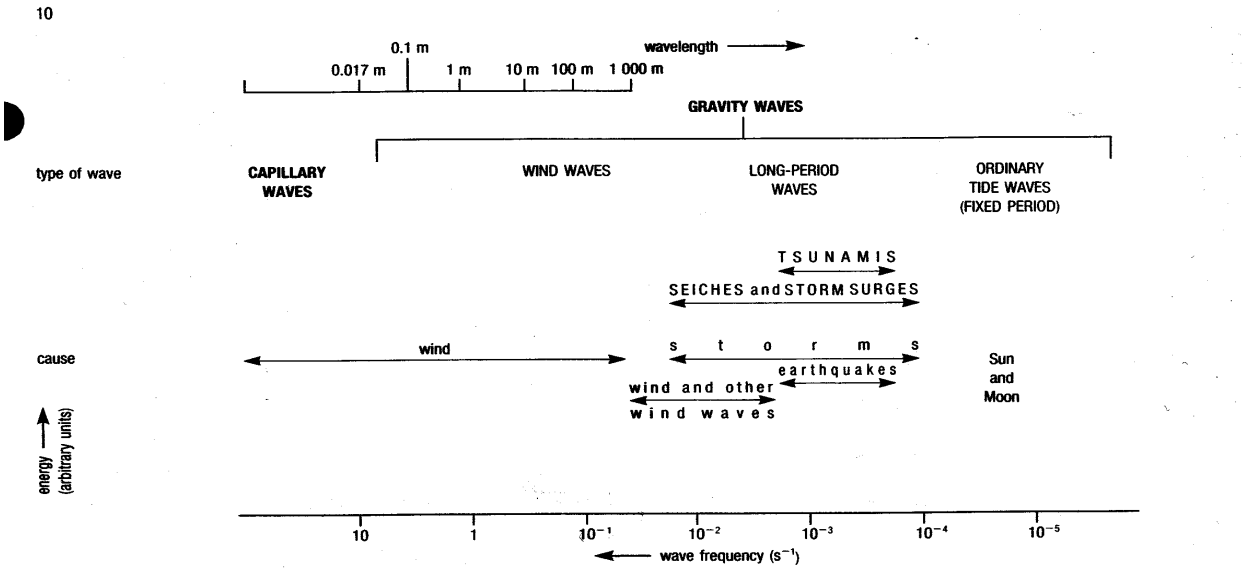
c. capillary wave (surface tension) and gravity wave (gravity force)

d. small amplitude wave and finite amplitude wave

e. deep water wave, intermediate water wave and shallow water wave

f. periodic wave (sinusoidal wave, cnoidal wave) and single wave (solitary wave)

g. non-permanent and permanent waves



3.2. Governing Equation and Boundary Conditions

3.2.1. governing equation

If flow is assumed to be incompressible and irrotational and the fluid is to be inviscid, the flow motion is governed by the Laplace equation. That is,

$$\nabla^2 \Phi = 0, \quad -h < z < \zeta$$

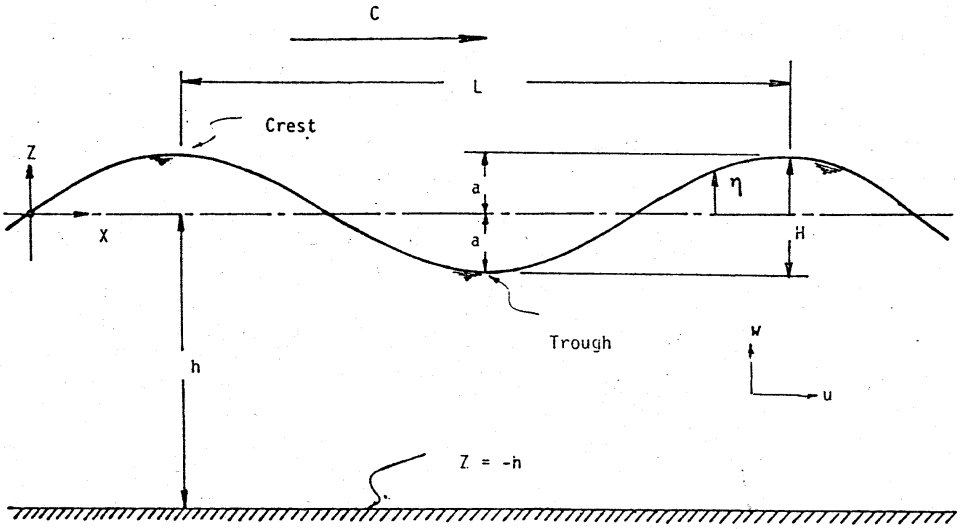


Fig. 2 미소 진폭파의 요소