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ERRATUM: HARMONIC WAVES ON AN ABRUPT TRANSITION [Int. J. Of Geomate. Vol 15, Issue 51 (2018), page 60-68]

*Harman Ajiwibowo

Faculty of Civil and Environmental Engineering, Institut Teknologi Bandung, Indonesia

*Corresponding Author

There was an error during the last review process, in section 2 Progressive Model. The error is in sentence **"..where are the wave period and *h* is the water depth?..".** The sentence should be written as **".. where T_p is the wave period and *h* is the water depth.."**

Part of section 2 can be rewritten as,

2. PROGRESSIVE MODEL

This section focuses on waves that are reflected and transmitted once. Figure 1 shows the geometry of the depth transition region. The fluid domain is divided into Regions 1 and 2, as shown. The incoming wave H_i will be assumed to propagate in the positive *x*-direction. At the vertical step, located at $x = x_1$, a portion of the wave will be reflected, and the remainder is transmitted.

By assuming linear superposition, the wave in Fig.1 is described as follows:

$$\eta_1 = \eta_i + \eta_{r1} = \frac{H_i}{2}\cos\left(k_1 x - \omega\, t + \varepsilon_i\right) + \frac{H_{r1}}{2}\cos\left(k_1 x + \omega\, t + \varepsilon_{r1}\right) \quad \text{at} \quad x < x_1 \qquad (1)$$

$$\eta_2 = \eta_{t1} = \frac{H_{t1}}{2}\cos\left(k_2 x - \omega\, t + \varepsilon_{t1}\right), x \geq x_1$$

where η_i , η_{t1} , and η_{r1} are the incident, transmitted, and reflected waves, respectively. ε_i , ε_{t1} , and ε_{r1} are the corresponding wave phases. The phases are referenced to the incident wave, whose phase is set to zero. k_1 and k_2 are the wave numbers before and after the step at $x = x_1$. The wave numbers are calculated using the long-wave dispersion condition as follows:

$$k_i = \frac{2\pi}{\sqrt{g h_i}\ T_p} \qquad (2)$$

where T_p is the wave period and *h* is the water depth. There are four unknowns: H_{t1}, H_{r1} , ε_{t1} , and ε_{r1}. The matching boundary conditions at the location of the step as shown in Fig.1 could be imposed. The first condition is that the free surface is continuous at $x = x_1$

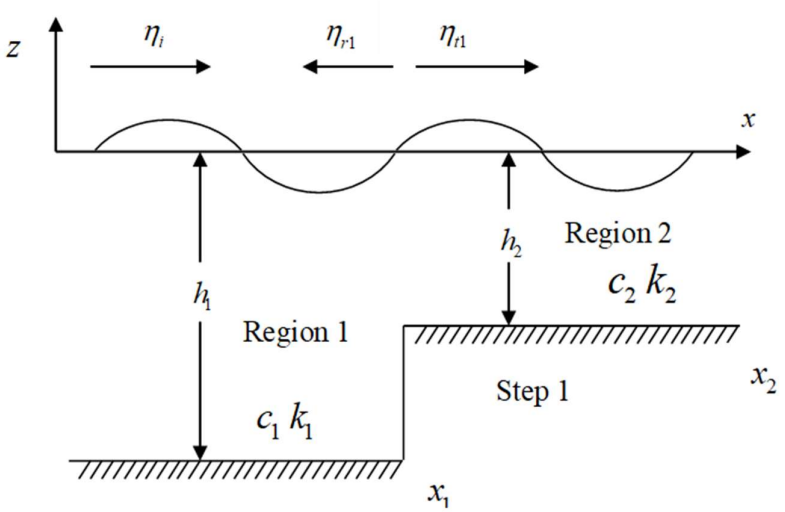

Fig.1 Elevation of a section of one-step abrupt transition.

The author sincerely regrets this error.