$$t_{Ps}(p_i) = H\left[\sqrt{\left(\frac{V_p}{V_s}\right)^2 - p_i^2 V_p^2} - \sqrt{1 - p_i^2 V_P^2}\right] \tag{1}$$

$$t_{Pps}(p_i) = H\left[\sqrt{\left(\frac{V_p}{V_s}\right)^2 - p_i^2 V_p^2} + \sqrt{1 - p_i^2 V_P^2}\right] \tag{2}$$

$$t_{Pss}(p_i) = 2H\sqrt{\left(\frac{V_p}{V_s}\right)^2 - p_i^2 V_p^2} \tag{3}$$

$$t_{Pps}(p_i) = \frac{\sqrt{\left(\frac{V_p}{V_s}\right)^2 - p_i^2 V_p^2} + \sqrt{1 - p_i^2 V_P^2}}{\sqrt{\left(\frac{V_p}{V_s}\right)^2 - p_i^2 V_p^2} - \sqrt{1 - p_i^2 V_P^2}}\, t_{Ps}(p_i) \tag{4}$$

$$t_{Pss}(p_i) = \frac{2\sqrt{\left(\frac{V_p}{V_s}\right)^2 - p_i^2 V_p^2}}{\sqrt{\left(\frac{V_p}{V_s}\right)^2 - p_i^2 V_p^2} - \sqrt{1 - p_i^2 V_P^2}}\, t_{Ps}(p_i) \tag{5}$$