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$$\lim_{x \to +\infty} \operatorname{arctg}\left[\frac{2x^2 + \log \operatorname{senh} x + 3x + 2}{x^2 - 3x + 5\log \cosh x} - \frac{\log \operatorname{senh} x}{x+3} \cdot \frac{\log \cosh x}{x+4}\right] =$$

$$= \lim_{x \to +\infty} \operatorname{arctg}\left[\frac{2x^2 + \log \frac{e^x + e^{-x}}{2} + 3x + 2}{x^2 - 3x + 5\log \frac{e^x + e^{-x}}{2}} - \frac{\log \frac{e^x - e^{-x}}{2}}{x+3} \cdot \frac{\log \frac{e^x + e^{-x}}{2}}{x+4}\right] =$$

$$= \lim_{x \to +\infty} \operatorname{arctg}\left[\frac{2x^2 + \log e^x + \log\left[\frac{1 - e^{-2x}}{2}\right] + 3x + 2}{x^2 - 3x + 5\log e^x + 5\log\left[\frac{1 + e^{-2x}}{2}\right]} - \frac{\log e^x + \log\left[\frac{1 - e^{-2x}}{2}\right]}{x+3} \cdot \frac{\log e^x + \log\left[\frac{1 + e^{-2x}}{2}\right]}{x+4}\right] =$$

$$= \lim_{x \to +\infty} \operatorname{arctg}\left[\frac{2 + \frac{4}{x} + \frac{2}{x^2} + \frac{\log\left(\frac{1 - e^{-2x}}{2}\right)}{x^2}}{1 + \frac{2}{x} + \frac{5\log\left(\frac{1 + e^{-2x}}{2}\right)}{x^2}} - \frac{x + \log\left(\frac{1 - e^{-2x}}{2}\right)}{x+3} \cdot \frac{x + \log\left(\frac{1 + e^{-2x}}{2}\right)}{x+4}\right] =$$

$$= \lim_{x \to \infty} \operatorname{arctg}\left[\frac{2 + \frac{4}{x} + \frac{2}{x^2} + \frac{\log\left(\frac{1 - e^{-2x}}{2}\right)}{x}}{1 + \frac{2}{x} + \frac{5\log\left(\frac{1 + e^{-2x}}{2}\right)}{x}} - \frac{1 + \frac{\log\left(\frac{1 - e^{-2x}}{2}\right)}{x}}{1 + \frac{3}{x}} \cdot \frac{1 + \frac{\log\left(\frac{1 + e^{-2x}}{2}\right)}{x}}{1 + \frac{4}{x}}\right] =$$

$$= \operatorname{arctg}\left[2 - 1\right] = \operatorname{arctg} 1 = \frac{\pi}{4}$$