$$\begin{cases} u = x^2 \\ dv = e^{-(s+2)x}\,dx \end{cases} \longrightarrow \begin{matrix} du = 2x\,dx \\ v = -\frac{1}{s+2}\,e^{-(s+2)x} \end{matrix}$$

$$-\frac{x^2}{s+2}\,e^{-(s+2)x} + \int \frac{2x}{s+2}\,e^{-(s+2)x}\,dx$$

$$-\frac{x^2}{s+2}\,e^{-(s+2)x} + \frac{2}{s+2}\int x\cdot e^{-(s+2)x}\,dx$$

$$\begin{cases} u = x \\ dv = e^{-(s+2)x}\,dx \end{cases} \rightarrow \begin{cases} du = dx \\ v = -\frac{1}{s+2}\,e^{-(s+2)x} \end{cases}$$

$$-\frac{x}{s+2}\,e^{-(s+2)x} + \frac{1}{s+2}\int e^{-(s+2)x}\,dx$$

$$-\frac{x^2}{s+2}\,e^{-(s+2)x} - \frac{2x}{(s+2)^2}\,e^{-(s+2)x} + \frac{2}{(s+2)^2}\cdot\left(-\frac{1}{s+2}\cdot e^{-(s+2)x}\right)$$

$$\left(-\frac{x^2}{s+2}\,e^{-(s+2)x} - \frac{2x}{(s+2)^2}\,e^{-(s+2)x} - \frac{2}{(s+2)^3}\,e^{-(s+2)x}\right)\Bigg|_0^{\infty}$$

$$\longrightarrow \boxed{\frac{2}{(s+2)^3}}$$