Notes on the formulation of weld constraints in SAP

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Given a frame P rigidly attached to body A with pose ${}^{A}X^{P} = ({}^{A_{o}}p^{P_{o}}, {}^{A}R^{P})$ and frame Q rigidly attached to body B with pose ${}^{B}X^{Q} = ({}^{B_{o}}p^{Q_{o}}, {}^{B}R^{Q})$ we can describe ${}^{P}R^{Q}$, frame