9.25: Twin law

The **twin law** is the set of twin operations mapping two individuals of a twin. It is obtained by coset decomposition of the point group of the twin lattice with respect to the intersection group of the point groups of the individuals in their respective orientations. Each operation in the same coset is a possible twin operation that, from the lattice viewpoint, is equivalent to any other operation in the same coset. Any of these can be taken as **coset representative** and indicated by the symbol of the twin element: $\bar{1}$, [*uvw*] and (*hkl*) for the centre (*inversion twin*), direction of the rotation axis (*rotation twin*) and Miller indices of the mirror plane (*reflection twin*), in the order. Except when one refers to a specific plane or direction, the symbols {*hkl*} or <*uvw*> have to be be used to indicate all the planes or directions which belong to the same coset and are therefore equivalent under the point group of the individual.

In case of TLQS twinning the equivalence of the operations in a coset is only approximate.