```mathematica
Bed[K_, ω_] :=
  Module[{t, r, XingsByArmpits, bends, faces, p, A, is},
   t = 1 - ω; r = t + t*;
   XingsByArmpits =
    List @@ PD[K] /. x : X[i_, j_, k_, l_] :>
       If[PositiveQ[x], X₊[-i, j, k, -l], X₋[-j, k, l, -i]];
   bends = Times @@ XingsByArmpits /.
     _[X][a_, b_, c_, d_] :> p_{a,-d} p_{b,-a} p_{c,-b} p_{d,-c};
   faces = bends //. p_{x__,y_} p_{y_,z__} :> p_{x,y,z};
   A = Table[0, Length@faces, Length@faces];
   Do[is = Position[faces, #][[1, 1]] & /@ List @@ x;

    A[[is, is]] += If[Head[x] === X₊,

       ( -r   -t   2 t   t*  )   (  r    -t  -2 t*  t*  )
       ( -t*   0   t*    0   ) , ( -t*    0   t*     0  ) ],
       ( 2 t*  t   -r   -t*  )   ( -2 t   t    r    -t* )
       (  t    0   -t    0   )   (  t     0   -t     0  )

    {x, XingsByArmpits}];

   MatrixSignature[A] ]
```