TwoPass@*k* gives all the knots that can be obtained by applying one 2–pass to the knot *k*, which is given in modified DT form.

```
TwoPass@k_MDT := TwoPass@k = Block[{a, c, n = Length@k,
    p = List @@ Build@k //
      (#ᵀ ⋃ (Abs@Reverse@# Sign@#)ᵀ)ᵀ⟦
        2⟧ &, v, y = {}},
   Do[v = Abs@p⟦Mod[{i, i + 1}, 2 n, 1]⟧;
    If[Sort@Sign@p⟦Mod[{i, i + 1}, 2 n, 1]⟧ == {-1, 1},
     Do[If[Total@Mod[l, 2] == 2,
       c = Range @@@ Partition[l + {1, -1, 1, -1}, 2];
       If[¬ MemberQ[Join @@ c, i], l = RotateLeft@l;
        c = Mod[Range @@@ Partition[
             l + {1, -1, 1, 2 n - 1}, 2], 2 n, 1]];
       If[Length[Join @@ c] < 2 n - 4
         ⋀ v ⋃ Join @@ c ==
          Abs@p⟦Join @@ c⟧ ⋃ Mod[{i, i + 1}, 2 n, 1],
        (*A 2-pass can be made with
          the given settings.*)
        AppendTo[y, Convert[Build@k /. x_Integer ↦
            PassMapping[v, l, p, c, n, Abs@x, i]]]]],
      {l, Sort@Join[#, v] & /@
        Subsets[Delete[Range[2 n],
          Mod[{{i, i + 1}}ᵀ, 2 n, 1]], {2}]}]],
    {i, 2 n}];
   KnotSort[Minimal /@ y ⋃ {}]];
```