

**C++ code 13.3.10: Declaration of `ENTITY_MATRIX_PROVIDER` class for the computation of the element matrix for the monolithic Whitney FEM discretization of the vector-potential-based 2D magnetostatic saddle point variational problem**

```
2 template <If::mesh::utils::MeshFunction MESH_FUNCTION>
3 class MagStat2DElementMatrixProvider {
4     public:
5         // The size of the element matrix is 6×6.
6         using ElemMat = Eigen::Matrix<double, 6, 6>;
7         MagStat2DElementMatrixProvider(const MagStat2DElementMatrixProvider &) =
8             delete;
9         MagStat2DElementMatrixProvider(MagStat2DElementMatrixProvider &&) noexcept =
10             default;
11         MagStat2DElementMatrixProvider &operator=(
12             const MagStat2DElementMatrixProvider &) = delete;
13         MagStat2DElementMatrixProvider &operator=(MagStat2DElementMatrixProvider &&) =
14             delete;
15         MagStat2DElementMatrixProvider() = delete;
16         virtual ~MagStat2DElementMatrixProvider() = default;
17
18         MagStat2DElementMatrixProvider(MESH_FUNCTION mu) : mu_(mu) {}
19
20         [[nodiscard]] bool isActive(const If::mesh::Entity & /*cell*/) {
21             return true;
22         }
23         [[nodiscard]] ElemMat Eval(const If::mesh::Entity &cell);
24
25     private:
26         ElemMat MK_;
27         MESH_FUNCTION mu_;
28 };
```