$$[s_{14}^{(2)}(t,3)]^{(7)} = \exp[-[\lambda_{14}^{(2)}(3)]^{(7)} t],$$

$$[s_{14}^{(2)}(t,4)]^{(7)} = \exp[-[\lambda_{14}^{(2)}(4)]^{(7)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{14}^{(2)}(1)]^{(7)},\ [\lambda_{14}^{(2)}(2)]^{(7)},\ [\lambda_{14}^{(2)}(3)]^{(7)}, [\lambda_{14}^{(2)}(4)]^{(7)},$$

for component $E_{21}^{(2)}$

$$[s_{21}^{(2)}(t,\cdot)]^{(7)} = [1, [s_{21}^{(2)}(t,1)]^{(7)}, [s_{21}^{(2)}(t,2)]^{(7)}, [s_{21}^{(2)}(t,3)]^{(7)}, [s_{21}^{(2)}(t,4)]^{(7)}]$$

coordinates

$$[s_{21}^{(2)}(t,1)]^{(7)} = \exp[-[\lambda_{21}^{(2)}(1)]^{(7)} t],$$

$$[s_{21}^{(2)}(t,2)]^{(7)} = \exp[-[\lambda_{21}^{(2)}(2)]^{(7)} t],$$

$$[s_{21}^{(2)}(t,3)]^{(7)} = \exp[-[\lambda_{21}^{(2)}(3)]^{(7)} t],$$

$$[s_{21}^{(2)}(t,4)]^{(7)} = \exp[-[\lambda_{21}^{(2)}(4)]^{(7)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{21}^{(2)}(1)]^{(7)},\ [\lambda_{21}^{(2)}(2)]^{(7)},\ [\lambda_{21}^{(2)}(3)]^{(7)}, [\lambda_{21}^{(2)}(4)]^{(7)},$$

for component $E_{22}^{(2)}$

$$[s_{22}^{(2)}(t,\cdot)]^{(7)} = [1, [s_{22}^{(2)}(t,1)]^{(7)}, [s_{22}^{(2)}(t,2)]^{(7)}, [s_{22}^{(2)}(t,3)]^{(7)}, [s_{22}^{(2)}(t,4)]^{(7)}]$$

coordinates

$$[s_{22}^{(2)}(t,1)]^{(7)} = \exp[-[\lambda_{22}^{(2)}(1)]^{(7)} t],$$

$$[s_{22}^{(2)}(t,2)]^{(7)} = \exp[-[\lambda_{22}^{(2)}(2)]^{(7)} t],$$

$$[s_{22}^{(2)}(t,3)]^{(7)} = \exp[-[\lambda_{22}^{(2)}(3)]^{(7)} t],$$

$$[s_{22}^{(2)}(t,4)]^{(7)} = \exp[-[\lambda_{22}^{(2)}(4)]^{(7)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{22}^{(2)}(1)]^{(7)},\ [\lambda_{22}^{(2)}(2)]^{(7)},\ [\lambda_{22}^{(2)}(3)]^{(7)}, [\lambda_{22}^{(2)}(4)]^{(7)},$$

for component $E_{31}^{(2)}$

$$[s_{31}^{(2)}(t,\cdot)]^{(7)} = [1, [s_{31}^{(2)}(t,1)]^{(7)}, [s_{31}^{(2)}(t,2)]^{(7)}, [s_{31}^{(2)}(t,3)]^{(7)}, [s_{31}^{(2)}(t,4)]^{(7)}]$$

coordinates

$$[s_{31}^{(2)}(t,1)]^{(7)} = \exp[-[\lambda_{31}^{(2)}(1)]^{(7)} t],$$

$$[s_{31}^{(2)}(t,2)]^{(7)} = \exp[-[\lambda_{31}^{(2)}(2)]^{(7)} t],$$

$$[s_{31}^{(2)}(t,3)]^{(7)} = \exp[-[\lambda_{31}^{(2)}(3)]^{(7)} t],$$

$$[s_{31}^{(2)}(t,4)]^{(7)} = \exp[-[\lambda_{31}^{(2)}(4)]^{(7)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{31}^{(2)}(1)]^{(7)},\ [\lambda_{31}^{(2)}(2)]^{(7)},\ [\lambda_{31}^{(2)}(3)]^{(7)}, [\lambda_{31}^{(2)}(4)]^{(7)},$$

for component $E_{41}^{(2)}$

$$[s_{41}^{(2)}(t,\cdot)]^{(7)} = [1, [s_{41}^{(2)}(t,1)]^{(7)}, [s_{41}^{(2)}(t,2)]^{(7)}, [s_{41}^{(2)}(t,3)]^{(7)}, [s_{41}^{(2)}(t,4)]^{(7)}]$$

coordinates

$$[s_{41}^{(2)}(t,1)]^{(7)} = \exp[-[\lambda_{41}^{(2)}(1)]^{(7)} t],$$

$$[s_{41}^{(2)}(t,2)]^{(7)} = \exp[-[\lambda_{41}^{(2)}(2)]^{(7)} t],$$

$$[s_{41}^{(2)}(t,3)]^{(7)} = \exp[-[\lambda_{41}^{(2)}(3)]^{(7)} t],$$

$$[s_{41}^{(2)}(t,4)]^{(7)} = \exp[-[\lambda_{41}^{(2)}(4)]^{(7)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{41}^{(2)}(1)]^{(7)},\ [\lambda_{41}^{(2)}(2)]^{(7)},\ [\lambda_{41}^{(2)}(3)]^{(7)}, [\lambda_{41}^{(2)}(4)]^{(7)},$$

for component $E_{51}^{(2)}$

$$[s_{51}^{(2)}(t,\cdot)]^{(7)} = [1, [s_{51}^{(2)}(t,1)]^{(7)}, [s_{51}^{(2)}(t,2)]^{(7)}, [s_{51}^{(2)}(t,3)]^{(7)}, [s_{51}^{(2)}(t,4)]^{(7)}]$$

coordinates

$$[s_{51}^{(2)}(t,1)]^{(7)} = \exp[-[\lambda_{51}^{(2)}(1)]^{(7)} t],$$

$$[s_{41}^{(2)}(t,2)]^{(7)} = \exp[-[\lambda_{41}^{(2)}(2)]^{(7)} t],$$

$$[s_{51}^{(2)}(t,3)]^{(7)} = \exp[-[\lambda_{51}^{(2)}(3)]^{(7)} t],$$

$$[s_{51}^{(2)}(t,4)]^{(7)} = \exp[-[\lambda_{51}^{(2)}(4)]^{(7)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{51}^{(2)}(1)]^{(7)},\ [\lambda_{51}^{(2)}(2)]^{(7)},\ [\lambda_{51}^{(2)}(3)]^{(7)}, [\lambda_{51}^{(6)}(4)]^{(7)},$$

for component $E_{61}^{(2)}$

$$[s_{61}^{(2)}(t,\cdot)]^{(7)} = [1, [s_{61}^{(2)}(t,1)]^{(7)}, [s_{61}^{(2)}(t,2)]^{(7)}, [s_{61}^{(2)}(t,3)]^{(7)}, [s_{61}^{(2)}(t,4)]^{(7)}]$$

coordinates

$$[s_{61}^{(2)}(t,1)]^{(7)} = \exp[-[\lambda_{61}^{(2)}(1)]^{(7)} t],$$

$$[s_{61}^{(2)}(t,2)]^{(7)} = \exp[-[\lambda_{61}^{(2)}(2)]^{(7)} t],$$

$$[s_{61}^{(2)}(t,3)]^{(7)} = \exp[-[\lambda_{61}^{(2)}(3)]^{(7)} t],$$

$$[s_{61}^{(2)}(t,4)]^{(7)} = \exp[-[\lambda_{61}^{(2)}(4)]^{(7)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{61}^{(2)}(1)]^{(7)},\ [\lambda_{61}^{(2)}(2)]^{(7)},\ [\lambda_{61}^{(2)}(3)]^{(7)}, [\lambda_{61}^{(2)}(4)]^{(7)},$$

for component $E_{71}^{(2)}$

$$[s_{71}^{(2)}(t,\cdot)]^{(7)} = [1, [s_{71}^{(2)}(t,1)]^{(7)}, [s_{71}^{(2)}(t,2)]^{(7)}, [s_{71}^{(2)}(t,3)]^{(7)}, [s_{71}^{(2)}(t,4)]^{(7)}]$$

coordinates

$$[s_{71}^{(2)}(t,1)]^{(7)} = \exp[-[\lambda_{71}^{(2)}(1)]^{(7)} t],$$

$$[s_{71}^{(2)}(t,2)]^{(7)} = \exp[-[\lambda_{71}^{(2)}(2)]^{(7)} t],$$

$$[s_{71}^{(2)}(t,3)]^{(7)} = \exp[-[\lambda_{71}^{(2)}(3)]^{(7)} t],$$

$$[s_{71}^{(2)}(t,4)]^{(7)} = \exp[-[\lambda_{71}^{(2)}(4)]^{(7)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{71}^{(2)}(1)]^{(7)},\ [\lambda_{71}^{(2)}(2)]^{(7)},\ [\lambda_{71}^{(2)}(3)]^{(7)}, [\lambda_{71}^{(2)}(4)]^{(7)},$$

- the reliability functions of the subsystem S_5 components

for component $E_{11}^{(5)}$

$$[s_{11}^{(5)}(t,\cdot)]^{(7)} = [1, [s_{11}^{(5)}(t,1)]^{(7)}, [s_{11}^{(5)}(t,2)]^{(7)}, [s_{11}^{(5)}(t,3)]^{(7)}, [s_{11}^{(5)}(t,4)]^{(7)}]$$

coordinates

$$[s_{11}^{(5)}(t,1)]^{(7)} = \exp[-[\lambda_{11}^{(5)}(1)]^{(7)} t],$$

$$[s_{11}^{(5)}(t,2)]^{(7)} = \exp[-[\lambda_{11}^{(5)}(2)]^{(7)} t],$$

$$[s_{11}^{(5)}(t,3)]^{(7)} = \exp[-[\lambda_{11}^{(5)}(3)]^{(7)} t],$$

$$[s_{11}^{(5)}(t,4)]^{(7)} = \exp[-[\lambda_{11}^{(5)}(4)]^{(7)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{11}^{(5)}(1)]^{(7)},\ [\lambda_{11}^{(5)}(2)]^{(7)},\ [\lambda_{11}^{(5)}(3)]^{(7)}, [\lambda_{11}^{(5)}(4)]^{(7)},$$

for component $E_{21}^{(5)}$

$$[s_{21}^{(5)}(t,\cdot)]^{(7)} = [1, [s_{21}^{(5)}(t,1)]^{(7)}, [s_{21}^{(5)}(t,2)]^{(7)}, [s_{21}^{(5)}(t,3)]^{(7)}, [s_{21}^{(5)}(t,4)]^{(7)}]$$

coordinates

$$[s_{21}^{(5)}(t,1)]^{(7)} = \exp[-[\lambda_{21}^{(5)}(1)]^{(7)} t],$$

$$[s_{21}^{(5)}(t,2)]^{(7)} = \exp[-[\lambda_{21}^{(5)}(2)]^{(7)} t],$$

$$[s_{21}^{(5)}(t,3)]^{(7)} = \exp[-[\lambda_{21}^{(5)}(3)]^{(7)} t],$$

$$[s_{21}^{(5)}(t,4)]^{(7)} = \exp[-[\lambda_{21}^{(5)}(4)]^{(7)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{21}^{(5)}(1)]^{(7)},\ [\lambda_{21}^{(5)}(2)]^{(7)},\ [\lambda_{21}^{(5)}(3)]^{(7)}, [\lambda_{21}^{(5)}(4)]^{(7)},$$

for component $E_{31}^{(5)}$

$$[s_{31}^{(5)}(t,\cdot)]^{(7)} = [1, [s_{31}^{(5)}(t,1)]^{(7)}, [s_{31}^{(5)}(t,2)]^{(7)}, [s_{31}^{(5)}(t,3)]^{(7)}, [s_{31}^{(5)}(t,4)]^{(7)}]$$

coordinates

$$[s_{31}^{(5)}(t,1)]^{(7)} = \exp[-[\lambda_{31}^{(5)}(1)]^{(7)}t],$$

$$[s_{31}^{(5)}(t,2)]^{(7)} = \exp[-[\lambda_{31}^{(5)}(2)]^{(7)}t],$$

$$[s_{31}^{(5)}(t,3)]^{(7)} = \exp[-[\lambda_{31}^{(5)}(3)]^{(7)}t],$$

$$[s_{31}^{(5)}(t,4)]^{(7)} = \exp[-[\lambda_{31}^{(5)}(4)]^{(7)}t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{31}^{(5)}(1)]^{(7)},\ [\lambda_{31}^{(5)}(2)]^{(7)},\ [\lambda_{31}^{(5)}(3)]^{(7)}, [\lambda_{31}^{(5)}(4)]^{(7)},$$

viii) at the system operation states z_8:

- the reliability functions of the subsystem S_3 components

for component $E_{11}^{(3)}$

$$[s_{11}^{(3)}(t,\cdot)]^{(8)} = [1, [s_{11}^{(3)}(t,1)]^{(8)}, [s_{11}^{(3)}(t,2)]^{(8)}, [s_{11}^{(3)}(t,3)]^{(8)}, [s_{11}^{(3)}(t,4)]^{(8)}]$$

coordinates

$$[s_{11}^{(3)}(t,1)]^{(8)} = \exp[-[\lambda_{11}^{(3)}(1)]^{(8)}t],$$

$$[s_{11}^{(3)}(t,2)]^{(8)} = \exp[-[\lambda_{11}^{(3)}(2)]^{(8)}t],$$

$$[s_{11}^{(3)}(t,3)]^{(8)} = \exp[-[\lambda_{11}^{(3)}(3)]^{(8)}t],$$

$$[s_{11}^{(3)}(t,4)]^{(8)} = \exp[-[\lambda_{11}^{(3)}(4)]^{(8)}t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{11}^{(3)}(1)]^{(8)},\ [\lambda_{11}^{(3)}(2)]^{(8)},\ [\lambda_{11}^{(3)}(3)]^{(8)}, [\lambda_{11}^{(3)}(4)]^{(8)},$$

for component $E_{21}^{(3)}$

$$[s_{21}^{(3)}(t,\cdot)]^{(8)} = [1, [s_{21}^{(3)}(t,1)]^{(8)}, [s_{21}^{(3)}(t,2)]^{(8)}, [s_{21}^{(3)}(t,3)]^{(8)}, [s_{21}^{(3)}(t,4)]^{(8)}],$$

coordinates

$$[s_{21}^{(3)}(t,1)]^{(8)} = \exp[-[\lambda_{21}^{(3)}(1)]^{(8)}t],$$

$$[s_{21}^{(3)}(t,2)]^{(8)} = \exp[-[\lambda_{21}^{(3)}(2)]^{(8)}t],$$

$$[s_{21}^{(3)}(t,3)]^{(8)} = \exp[-[\lambda_{21}^{(3)}(3)]^{(8)}t],$$

$$[s_{21}^{(3)}(t,4)]^{(8)} = \exp[-[\lambda_{21}^{(3)}(4)]^{(8)}t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{21}^{(3)}(1)]^{(8)},\ [\lambda_{21}^{(3)}(2)]^{(8)},\ [\lambda_{21}^{(3)}(3)]^{(8)}, [\lambda_{21}^{(3)}(4)]^{(8)},$$

- the reliability functions of the subsystem S_4 components

for component $E_{11}^{(4)}$

$$[s_{11}^{(4)}(t,\cdot)]^{(8)} = [1, [s_{11}^{(4)}(t,1)]^{(8)}, [s_{11}^{(4)}(t,2)]^{(8)}, [s_{11}^{(4)}(t,3)]^{(8)}, [s_{11}^{(4)}(t,4)]^{(8)}]$$

coordinates

$$[s_{11}^{(4)}(t,1)]^{(8)} = \exp[-[\lambda_{11}^{(4)}(1)]^{(8)}t],$$

$$[s_{11}^{(4)}(t,2)]^{(8)} = \exp[-[\lambda_{11}^{(4)}(2)]^{(8)}t],$$

$$[s_{11}^{(4)}(t,3)]^{(8)} = \exp[-[\lambda_{11}^{(4)}(3)]^{(8)}t],$$

$$[s_{11}^{(4)}(t,4)]^{(8)} = \exp[-[\lambda_{11}^{(4)}(4)]^{(8)}t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{11}^{(4)}(1)]^{(8)},\ [\lambda_{11}^{(4)}(2)]^{(8)},\ [\lambda_{11}^{(4)}(3)]^{(8)}, [\lambda_{11}^{(4)}(4)]^{(8)},$$

ix) at the system operation states z_9:

- the reliability functions of the subsystem S_3 components

for component $E_{11}^{(3)}$

$$[s_{11}^{(3)}(t,\cdot)]^{(9)} = [1, [s_{11}^{(3)}(t,1)]^{(9)}, [s_{11}^{(3)}(t,2)]^{(9)}, [s_{11}^{(3)}(t,3)]^{(9)}, [s_{11}^{(3)}(t,4)]^{(9)}]$$

coordinates

$$[s_{11}^{(3)}(t,1)]^{(9)} = \exp[-[\lambda_{11}^{(3)}(1)]^{(9)}t],$$

$$[s_{11}^{(3)}(t,2)]^{(9)} = \exp[-[\lambda_{11}^{(3)}(2)]^{(9)}t],$$

$$[s_{11}^{(3)}(t,3)]^{(9)} = \exp[-[\lambda_{11}^{(3)}(3)]^{(9)}t],$$

$$[s_{11}^{(3)}(t,4)]^{(9)} = \exp[-[\lambda_{11}^{(3)}(4)]^{(9)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{11}^{(3)}(1)]^{(9)},\ [\lambda_{11}^{(3)}(2)]^{(9)},\ [\lambda_{11}^{(3)}(3)]^{(9)},\ [\lambda_{11}^{(3)}(4)]^{(9)},$$

for component $E_{21}^{(3)}$

$$[s_{21}^{(3)}(t,\cdot)]^{(9)} = [1, [s_{21}^{(3)}(t,1)]^{(9)}, [s_{21}^{(3)}(t,2)]^{(9)}, [s_{21}^{(3)}(t,3)]^{(9)}, [s_{21}^{(3)}(t,4)]^{(9)}]$$

coordinates

$$[s_{21}^{(3)}(t,1)]^{(9)} = \exp[-[\lambda_{21}^{(3)}(1)]^{(9)} t],$$

$$[s_{21}^{(3)}(t,2)]^{(9)} = \exp[-[\lambda_{21}^{(3)}(2)]^{(9)} t],$$

$$[s_{21}^{(3)}(t,3)]^{(9)} = \exp[-[\lambda_{21}^{(3)}(3)]^{(9)} t],$$

$$[s_{21}^{(3)}(t,4)]^{(9)} = \exp[-[\lambda_{21}^{(3)}(4)]^{(9)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{21}^{(3)}(1)]^{(9)},\ [\lambda_{21}^{(3)}(2)]^{(9)},\ [\lambda_{21}^{(3)}(3)]^{(9)},\ [\lambda_{21}^{(3)}(4)]^{(9)},$$

- the reliability functions of the subsystem S_4 components

for component $E_{11}^{(4)}$

$$[s_{11}^{(4)}(t,\cdot)]^{(9)} = [1, [s_{11}^{(4)}(t,1)]^{(9)}, [s_{11}^{(4)}(t,2)]^{(9)}, [s_{11}^{(4)}(t,3)]^{(9)}, [s_{11}^{(4)}(t,4)]^{(9)}]$$

coordinates

$$[s_{11}^{(4)}(t,1)]^{(9)} = \exp[-[\lambda_{11}^{(4)}(1)]^{(9)} t],$$

$$[s_{11}^{(4)}(t,2)]^{(9)} = \exp[-[\lambda_{11}^{(4)}(2)]^{(9)} t],$$

$$[s_{11}^{(4)}(t,3)]^{(9)} = \exp[-[\lambda_{11}^{(4)}(3)]^{(9)} t],$$

$$[s_{11}^{(4)}(t,4)]^{(9)} = \exp[-[\lambda_{11}^{(4)}(4)]^{(9)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{11}^{(4)}(1)]^{(9)},\ [\lambda_{11}^{(4)}(2)]^{(9)},\ [\lambda_{11}^{(4)}(3)]^{(9)},\ [\lambda_{11}^{(4)}(4)]^{(9)},$$

x) at the system operation states z_{10}:

- the reliability functions of the subsystem S_1 components

for component $E_{11}^{(1)}$

$$[s_{11}^{(1)}(t,\cdot)]^{(10)} = [1, [s_{11}^{(1)}(t,1)]^{(10)}, [s_{11}^{(1)}(t,2)]^{(10)}, [s_{11}^{(1)}(t,3)]^{(10)}, [s_{11}^{(1)}(t,4)]^{(10)}]$$

coordinates

$$[s_{11}^{(1)}(t,1)]^{(10)} = \exp[-[\lambda_{11}^{(1)}(1)]^{(10)} t],$$

$$[s_{11}^{(1)}(t,2)]^{(10)} = \exp[-[\lambda_{11}^{(1)}(2)]^{(10)} t],$$

$$[s_{11}^{(1)}(t,3)]^{(10)} = \exp[-[\lambda_{11}^{(1)}(3)]^{(10)} t],$$

$$[s_{11}^{(1)}(t,4)]^{(10)} = \exp[-[\lambda_{11}^{(1)}(4)]^{(10)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{11}^{(1)}(1)]^{(10)},\ [\lambda_{11}^{(1)}(2)]^{(10)},\ [\lambda_{11}^{(1)}(3)]^{(10)},\ [\lambda_{11}^{(1)}(4)]^{(10)},$$

- the reliability functions of the subsystem S_2 components

for component $E_{11}^{(2)}$

$$[s_{11}^{(2)}(t,\cdot)]^{(10)} = [1, [s_{11}^{(2)}(t,1)]^{(10)}, [s_{11}^{(2)}(t,2)]^{(10)}, [s_{11}^{(2)}(t,3)]^{(10)}, [s_{11}^{(2)}(t,4)]^{(10)}]$$

coordinates

$$[s_{11}^{(2)}(t,1)]^{(10)} = \exp[-[\lambda_{11}^{(2)}(1)]^{(10)} t],$$

$$[s_{11}^{(2)}(t,2)]^{(10)} = \exp[-[\lambda_{11}^{(2)}(2)]^{(10)} t],$$

$$[s_{11}^{(2)}(t,3)]^{(10)} = \exp[-[\lambda_{11}^{(2)}(3)]^{(10)} t],$$

$$[s_{11}^{(2)}(t,4)]^{(10)} = \exp[-[\lambda_{11}^{(2)}(4)]^{(10)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{11}^{(2)}(1)]^{(10)},\ [\lambda_{11}^{(2)}(2)]^{(10)},\ [\lambda_{11}^{(2)}(3)]^{(10)},\ [\lambda_{11}^{(2)}(4)]^{(10)},$$

for component $E_{12}^{(2)}$

$$[s_{12}^{(2)}(t,\cdot)]^{(10)} = [1, [s_{12}^{(2)}(t,1)]^{(10)}, [s_{12}^{(2)}(t,2)]^{(10)}, [s_{12}^{(2)}(t,3)]^{(10)}, [s_{12}^{(2)}(t,4)]^{(10)}]$$

coordinates

$$[s_{12}^{(2)}(t,1)]^{(10)} = \exp[-[\lambda_{12}^{(2)}(1)]^{(10)} t],$$

$$[s_{12}^{(2)}(t,2)]^{(10)} = \exp[-[\lambda_{12}^{(2)}(2)]^{(10)} t],$$

$$[s_{12}^{(2)}(t,3)]^{(10)} = \exp[-[\lambda_{12}^{(2)}(3)]^{(10)} t],$$

$$[s_{12}^{(2)}(t,4)]^{(10)} = \exp[-[\lambda_{12}^{(2)}(4)]^{(10)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{12}^{(2)}(1)]^{(10)}, [\lambda_{12}^{(2)}(2)]^{(10)}, [\lambda_{12}^{(2)}(3)]^{(10)}, [\lambda_{12}^{(2)}(4)]^{(10)},$$

for component $E_{13}^{(2)}$

$$[s_{13}^{(2)}(t,\cdot)]^{(10)} = [1, [s_{13}^{(2)}(t,1)]^{(10)}, [s_{13}^{(2)}(t,2)]^{(10)}, [s_{13}^{(2)}(t,3)]^{(10)}, [s_{13}^{(2)}(t,4)]^{(10)}]$$

coordinates

$$[s_{13}^{(2)}(t,1)]^{(10)} = \exp[-[\lambda_{13}^{(2)}(1)]^{(10)} t],$$

$$[s_{13}^{(2)}(t,2)]^{(10)} = \exp[-[\lambda_{13}^{(2)}(2)]^{(10)} t],$$

$$[s_{13}^{(2)}(t,3)]^{(10)} = \exp[-[\lambda_{13}^{(2)}(3)]^{(10)} t],$$

$$[s_{13}^{(2)}(t,4)]^{(10)} = \exp[-[\lambda_{13}^{(2)}(4)]^{(10)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{13}^{(2)}(1)]^{(10)}, [\lambda_{13}^{(2)}(2)]^{(10)}, [\lambda_{13}^{(2)}(3)]^{(10)}, [\lambda_{13}^{(2)}(4)]^{(10)},$$

for component $E_{14}^{(2)}$

$$[s_{14}^{(2)}(t,\cdot)]^{(10)} = [1, [s_{14}^{(2)}(t,1)]^{(10)}, [s_{14}^{(2)}(t,2)]^{(10)}, [s_{14}^{(2)}(t,3)]^{(10)}, [s_{14}^{(2)}(t,4)]^{(10)}]$$

coordinates

$$[s_{14}^{(2)}(t,1)]^{(10)} = \exp[-[\lambda_{14}^{(2)}(1)]^{(10)} t],$$

$$[s_{14}^{(2)}(t,2)]^{(10)} = \exp[-[\lambda_{14}^{(2)}(2)]^{(10)} t],$$

$$[s_{14}^{(2)}(t,3)]^{(10)} = \exp[-[\lambda_{14}^{(2)}(3)]^{(10)} t],$$

$$[s_{14}^{(2)}(t,4)]^{(10)} = \exp[-[\lambda_{14}^{(2)}(4)]^{(10)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{14}^{(2)}(1)]^{(10)}, [\lambda_{14}^{(2)}(2)]^{(10)}, [\lambda_{14}^{(2)}(3)]^{(10)}, [\lambda_{14}^{(2)}(4)]^{(10)},$$

for component $E_{21}^{(2)}$

$$[s_{21}^{(2)}(t,\cdot)]^{(10)} = [1, [s_{21}^{(2)}(t,1)]^{(10)}, [s_{21}^{(2)}(t,2)]^{(10)}, [s_{21}^{(2)}(t,3)]^{(10)}, [s_{21}^{(2)}(t,4)]^{(10)}]$$

coordinates

$$[s_{21}^{(2)}(t,1)]^{(10)} = \exp[-[\lambda_{21}^{(2)}(1)]^{(10)} t],$$

$$[s_{21}^{(2)}(t,2)]^{(10)} = \exp[-[\lambda_{21}^{(2)}(2)]^{(10)} t],$$

$$[s_{21}^{(2)}(t,3)]^{(10)} = \exp[-[\lambda_{21}^{(2)}(3)]^{(10)} t],$$

$$[s_{21}^{(2)}(t,4)]^{(10)} = \exp[-[\lambda_{21}^{(2)}(4)]^{(10)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{21}^{(2)}(1)]^{(10)}, [\lambda_{21}^{(2)}(2)]^{(10)}, [\lambda_{21}^{(2)}(3)]^{(10)}, [\lambda_{21}^{(2)}(4)]^{(10)},$$

for component $E_{22}^{(2)}$

$$[s_{22}^{(2)}(t,\cdot)]^{(10)} = [1, [s_{22}^{(2)}(t,1)]^{(10)}, [s_{22}^{(2)}(t,2)]^{(10)}, [s_{22}^{(2)}(t,3)]^{(10)}, [s_{22}^{(2)}(t,4)]^{(10)}]$$

coordinates

$$[s_{22}^{(2)}(t,1)]^{(10)} = \exp[-[\lambda_{22}^{(2)}(1)]^{(10)} t],$$

$$[s_{22}^{(2)}(t,2)]^{(10)} = \exp[-[\lambda_{22}^{(2)}(2)]^{(10)} t],$$

$$[s_{22}^{(2)}(t,3)]^{(10)} = \exp[-[\lambda_{22}^{(2)}(3)]^{(10)} t],$$

$$[s_{22}^{(2)}(t,4)]^{(10)} = \exp[-[\lambda_{22}^{(2)}(4)]^{(10)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{22}^{(2)}(1)]^{(10)}, [\lambda_{22}^{(2)}(2)]^{(10)}, [\lambda_{22}^{(2)}(3)]^{(10)}, [\lambda_{22}^{(2)}(4)]^{(10)},$$

for component $E_{31}^{(2)}$

$$[s_{31}^{(2)}(t,\cdot)]^{(10)} = [1,[s_{31}^{(2)}(t,1)]^{(10)},[s_{31}^{(2)}(t,2)]^{(10)},$$
$$[s_{31}^{(2)}(t,3)]^{(10)},[s_{31}^{(2)}(t,4)]^{(10)}]$$

coordinates

$$[s_{31}^{(2)}(t,1)]^{(10)} = \exp[-[\lambda_{31}^{(2)}(1)]^{(10)}t],$$

$$[s_{31}^{(2)}(t,2)]^{(10)} = \exp[-[\lambda_{31}^{(2)}(2)]^{(10)}t],$$

$$[s_{31}^{(2)}(t,3)]^{(10)} = \exp[-[\lambda_{31}^{(2)}(3)]^{(10)}t],$$

$$[s_{31}^{(2)}(t,4)]^{(10)} = \exp[-[\lambda_{31}^{(2)}(4)]^{(10)}t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{31}^{(2)}(1)]^{(10)},\ [\lambda_{31}^{(2)}(2)]^{(10)},\ [\lambda_{31}^{(2)}(3)]^{(10)},[\lambda_{31}^{(2)}(4)]^{(10)},$$

for component $E_{41}^{(2)}$

$$[s_{41}^{(2)}(t,\cdot)]^{(10)} = [1,[s_{41}^{(2)}(t,1)]^{(10)},[s_{41}^{(2)}(t,2)]^{(10)},$$
$$[s_{41}^{(2)}(t,3)]^{(10)},[s_{41}^{(2)}(t,4)]^{(10)}],$$

coordinates

$$[s_{41}^{(2)}(t,1)]^{(10)} = \exp[-[\lambda_{41}^{(2)}(1)]^{(10)}t],$$

$$[s_{41}^{(2)}(t,2)]^{(10)} = \exp[-[\lambda_{41}^{(2)}(2)]^{(10)}t],$$

$$[s_{41}^{(2)}(t,3)]^{(10)} = \exp[-[\lambda_{41}^{(2)}(3)]^{(10)}t],$$

$$[s_{41}^{(2)}(t,4)]^{(10)} = \exp[-[\lambda_{41}^{(2)}(4)]^{(10)}t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{41}^{(2)}(1)]^{(10)},\ [\lambda_{41}^{(2)}(2)]^{(10)},\ [\lambda_{41}^{(2)}(3)]^{(10)},[\lambda_{41}^{(2)}(4)]^{(10)},$$

for component $E_{51}^{(2)}$

$$[s_{51}^{(2)}(t,\cdot)]^{(10)} = [1,[s_{51}^{(2)}(t,1)]^{(10)},[s_{51}^{(2)}(t,2)]^{(10)},$$
$$[s_{51}^{(2)}(t,3)]^{(10)},[s_{51}^{(2)}(t,4)]^{(10)}]$$

coordinates

$$[s_{51}^{(2)}(t,1)]^{(10)} = \exp[-[\lambda_{51}^{(2)}(1)]^{(10)}t],$$

$$[s_{41}^{(2)}(t,2)]^{(10)} = \exp[-[\lambda_{41}^{(2)}(2)]^{(10)}t],$$

$$[s_{51}^{(2)}(t,3)]^{(10)} = \exp[-[\lambda_{51}^{(2)}(3)]^{(10)}t],$$

$$[s_{51}^{(2)}(t,4)]^{(10)} = \exp[-[\lambda_{51}^{(2)}(4)]^{(10)}t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{51}^{(2)}(1)]^{(10)},\ [\lambda_{51}^{(2)}(2)]^{(10)},\ [\lambda_{51}^{(2)}(3)]^{(10)},[\lambda_{51}^{(6)}(4)]^{(10)},$$

for component $E_{61}^{(2)}$

$$[s_{61}^{(2)}(t,\cdot)]^{(10)} = [1,[s_{61}^{(2)}(t,1)]^{(10)},[s_{61}^{(2)}(t,2)]^{(10)},$$
$$[s_{61}^{(2)}(t,3)]^{(10)},[s_{61}^{(2)}(t,4)]^{(10)}]$$

coordinates

$$[s_{61}^{(2)}(t,1)]^{(10)} = \exp[-[\lambda_{61}^{(2)}(1)]^{(10)}t],$$

$$[s_{61}^{(2)}(t,2)]^{(10)} = \exp[-[\lambda_{61}^{(2)}(2)]^{(10)}t],$$

$$[s_{61}^{(2)}(t,3)]^{(10)} = \exp[-[\lambda_{61}^{(2)}(3)]^{(10)}t],$$

$$[s_{61}^{(2)}(t,4)]^{(10)} = \exp[-[\lambda_{61}^{(2)}(4)]^{(10)}t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{61}^{(2)}(1)]^{(10)},\ [\lambda_{61}^{(2)}(2)]^{(10)},\ [\lambda_{61}^{(2)}(3)]^{(10)},[\lambda_{61}^{(2)}(4)]^{(10)},$$

for component $E_{71}^{(2)}$

$$[s_{71}^{(2)}(t,\cdot)]^{(10)} = [1,[s_{71}^{(2)}(t,1)]^{(10)},[s_{71}^{(2)}(t,2)]^{(10)},$$
$$[s_{71}^{(2)}(t,3)]^{(10)},[s_{71}^{(2)}(t,4)]^{(10)}],$$

coordinates

$$[s_{71}^{(2)}(t,1)]^{(10)} = \exp[-[\lambda_{71}^{(2)}(1)]^{(10)}t],$$

$$[s_{71}^{(2)}(t,2)]^{(10)} = \exp[-[\lambda_{71}^{(2)}(2)]^{(10)}t],$$

$$[s_{71}^{(2)}(t,3)]^{(10)} = \exp[-[\lambda_{71}^{(2)}(3)]^{(10)}t],$$

$$[s_{71}^{(2)}(t,4)]^{(10)} = \exp[-[\lambda_{71}^{(2)}(4)]^{(10)}t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$[\lambda_{71}^{(2)}(1)]^{(10)}$, $[\lambda_{71}^{(2)}(2)]^{(10)}$, $[\lambda_{71}^{(2)}(3)]^{(10)}$, $[\lambda_{71}^{(2)}(4)]^{(10)}$,

- the reliability functions of the subsystem S_5 components

for component $E_{11}^{(5)}$

$$[s_{11}^{(5)}(t,\cdot)]^{(10)} = [1, [s_{11}^{(5)}(t,1)]^{(10)}, [s_{11}^{(5)}(t,2)]^{(10)}, [s_{11}^{(5)}(t,3)]^{(10)}, [s_{11}^{(5)}(t,4)]^{(10)}]$$

coordinates

$$[s_{11}^{(5)}(t,1)]^{(10)} = \exp[-[\lambda_{11}^{(5)}(1)]^{(10)} t],$$

$$[s_{11}^{(5)}(t,2)]^{(10)} = \exp[-[\lambda_{11}^{(5)}(2)]^{(10)} t],$$

$$[s_{11}^{(5)}(t,3)]^{(10)} = \exp[-[\lambda_{11}^{(5)}(3)]^{(10)} t],$$

$$[s_{11}^{(5)}(t,4)]^{(10)} = \exp[-[\lambda_{11}^{(5)}(4)]^{(10)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$[\lambda_{11}^{(5)}(1)]^{(10)}$, $[\lambda_{11}^{(5)}(2)]^{(10)}$, $[\lambda_{11}^{(5)}(3)]^{(10)}$, $[\lambda_{11}^{(5)}(4)]^{(10)}$,

for component $E_{21}^{(5)}$

$$[s_{21}^{(5)}(t,\cdot)]^{(10)} = [1, [s_{21}^{(5)}(t,1)]^{(10)}, [s_{21}^{(5)}(t,2)]^{(10)}, [s_{21}^{(5)}(t,3)]^{(10)}, [s_{21}^{(5)}(t,4)]^{(10)}]$$

coordinates

$$[s_{21}^{(5)}(t,1)]^{(10)} = \exp[-[\lambda_{21}^{(5)}(1)]^{(10)} t],$$

$$[s_{21}^{(5)}(t,2)]^{(10)} = \exp[-[\lambda_{21}^{(5)}(2)]^{(10)} t],$$

$$[s_{21}^{(5)}(t,3)]^{(10)} = \exp[-[\lambda_{21}^{(5)}(3)]^{(10)} t],$$

$$[s_{21}^{(5)}(t,4)]^{(10)} = \exp[-[\lambda_{21}^{(5)}(4)]^{(10)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$[\lambda_{21}^{(5)}(1)]^{(10)}$, $[\lambda_{21}^{(5)}(2)]^{(10)}$, $[\lambda_{21}^{(5)}(3)]^{(10)}$, $[\lambda_{21}^{(5)}(4)]^{(10)}$,

for component $E_{31}^{(5)}$

$$[s_{31}^{(5)}(t,\cdot)]^{(10)} = [1, [s_{31}^{(5)}(t,1)]^{(10)}, [s_{31}^{(5)}(t,2)]^{(10)}, [s_{31}^{(5)}(t,3)]^{(10)}, [s_{31}^{(5)}(t,4)]^{(10)}]$$

coordinates

$$[s_{31}^{(5)}(t,1)]^{(10)} = \exp[-[\lambda_{31}^{(5)}(1)]^{(10)} t],$$

$$[s_{31}^{(5)}(t,2)]^{(10)} = \exp[-[\lambda_{31}^{(5)}(2)]^{(10)} t],$$

$$[s_{31}^{(5)}(t,3)]^{(10)} = \exp[-[\lambda_{31}^{(5)}(3)]^{(10)} t],$$

$$[s_{31}^{(5)}(t,4)]^{(10)} = \exp[-[\lambda_{31}^{(5)}(4)]^{(10)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$[\lambda_{31}^{(5)}(1)]^{(10)}$, $[\lambda_{31}^{(5)}(2)]^{(10)}$, $[\lambda_{31}^{(5)}(3)]^{(10)}$, $[\lambda_{31}^{(5)}(4)]^{(10)}$,

xi) at the system operation states z_{11}:

- the reliability functions of the subsystem S_1 components

for component $E_{11}^{(1)}$

$$[s_{11}^{(1)}(t,\cdot)]^{(11)} = [1, [s_{11}^{(1)}(t,1)]^{(11)}, [s_{11}^{(1)}(t,2)]^{(11)}, [s_{11}^{(1)}(t,3)]^{(11)}, [s_{11}^{(1)}(t,4)]^{(11)}]$$

coordinates

$$[s_{11}^{(1)}(t,1)]^{(11)} = \exp[-[\lambda_{11}^{(1)}(1)]^{(11)} t],$$

$$[s_{11}^{(1)}(t,2)]^{(11)} = \exp[-[\lambda_{11}^{(1)}(2)]^{(11)} t],$$

$$[s_{11}^{(1)}(t,3)]^{(11)} = \exp[-[\lambda_{11}^{(1)}(3)]^{(11)} t],$$

$$[s_{11}^{(1)}(t,4)]^{(11)} = \exp[-[\lambda_{11}^{(1)}(4)]^{(11)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$[\lambda_{11}^{(1)}(1)]^{(11)}$, $[\lambda_{11}^{(1)}(2)]^{(11)}$, $[\lambda_{11}^{(1)}(3)]^{(11)}$, $[\lambda_{11}^{(1)}(4)]^{(11)}$,

- the reliability functions of the subsystem S_2 components

for component $E_{11}^{(2)}$

$$[s_{11}^{(2)}(t,\cdot)]^{(11)} = [1, [s_{11}^{(2)}(t,1)]^{(11)}, [s_{11}^{(2)}(t,2)]^{(11)}, [s_{11}^{(2)}(t,3)]^{(11)}, [s_{11}^{(2)}(t,4)]^{(11)}]$$

coordinates

$$[s_{11}^{(2)}(t,1)]^{(11)} = \exp[-[\lambda_{11}^{(2)}(1)]^{(11)} t],$$

$$[s_{11}^{(2)}(t,2)]^{(11)} = \exp[-[\lambda_{11}^{(2)}(2)]^{(11)} t],$$

$$[s_{11}^{(2)}(t,3)]^{(11)} = \exp[-[\lambda_{11}^{(2)}(3)]^{(11)} t],$$

$$[s_{11}^{(2)}(t,4)]^{(11)} = \exp[-[\lambda_{11}^{(2)}(4)]^{(11)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{11}^{(2)}(1)]^{(11)},\ [\lambda_{11}^{(2)}(2)]^{(11)},\ [\lambda_{11}^{(2)}(3)]^{(11)}, [\lambda_{11}^{(2)}(4)]^{(11)},$$

for component $E_{12}^{(2)}$

$$[s_{12}^{(2)}(t,\cdot)]^{(11)} = [1, [s_{12}^{(2)}(t,1)]^{(11)}, [s_{12}^{(2)}(t,2)]^{(11)}, [s_{12}^{(2)}(t,3)]^{(11)}, [s_{12}^{(2)}(t,4)]^{(11)}],$$

coordinates

$$[s_{12}^{(2)}(t,1)]^{(11)} = \exp[-[\lambda_{12}^{(2)}(1)]^{(11)} t],$$

$$[s_{12}^{(2)}(t,2)]^{(11)} = \exp[-[\lambda_{12}^{(2)}(2)]^{(11)} t],$$

$$[s_{12}^{(2)}(t,3)]^{(11)} = \exp[-[\lambda_{12}^{(2)}(3)]^{(11)} t],$$

$$[s_{12}^{(2)}(t,4)]^{(11)} = \exp[-[\lambda_{12}^{(2)}(4)]^{(11)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{12}^{(2)}(1)]^{(11)},\ [\lambda_{12}^{(2)}(2)]^{(11)},\ [\lambda_{12}^{(2)}(3)]^{(11)}, [\lambda_{12}^{(2)}(4)]^{(11)},$$

for component $E_{13}^{(2)}$

$$[s_{13}^{(2)}(t,\cdot)]^{(11)} = [1, [s_{13}^{(2)}(t,1)]^{(11)}, [s_{13}^{(2)}(t,2)]^{(11)}, [s_{13}^{(2)}(t,3)]^{(11)}, [s_{13}^{(2)}(t,4)]^{(11)}]$$

coordinates

$$[s_{13}^{(2)}(t,1)]^{(11)} = \exp[-[\lambda_{13}^{(2)}(1)]^{(11)} t],$$

$$[s_{13}^{(2)}(t,2)]^{(11)} = \exp[-[\lambda_{13}^{(2)}(2)]^{(11)} t],$$

$$[s_{13}^{(2)}(t,3)]^{(11)} = \exp[-[\lambda_{13}^{(2)}(3)]^{(11)} t],$$

$$[s_{13}^{(2)}(t,4)]^{(11)} = \exp[-[\lambda_{13}^{(2)}(4)]^{(11)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{13}^{(2)}(1)]^{(11)},\ [\lambda_{13}^{(2)}(2)]^{(11)},\ [\lambda_{13}^{(2)}(3)]^{(11)}, [\lambda_{13}^{(2)}(4)]^{(11)},$$

for component $E_{14}^{(2)}$

$$[s_{14}^{(2)}(t,\cdot)]^{(11)} = [1, [s_{14}^{(2)}(t,1)]^{(11)}, [s_{14}^{(2)}(t,2)]^{(11)}, [s_{14}^{(2)}(t,3)]^{(11)}, [s_{14}^{(2)}(t,4)]^{(11)}]$$

coordinates

$$[s_{14}^{(2)}(t,1)]^{(11)} = \exp[-[\lambda_{14}^{(2)}(1)]^{(11)} t],$$

$$[s_{14}^{(2)}(t,2)]^{(11)} = \exp[-[\lambda_{14}^{(2)}(2)]^{(11)} t],$$

$$[s_{14}^{(2)}(t,3)]^{(11)} = \exp[-[\lambda_{14}^{(2)}(3)]^{(11)} t],$$

$$[s_{14}^{(2)}(t,4)]^{(11)} = \exp[-[\lambda_{14}^{(2)}(4)]^{(11)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{14}^{(2)}(1)]^{(11)},\ [\lambda_{14}^{(2)}(2)]^{(11)},\ [\lambda_{14}^{(2)}(3)]^{(11)}, [\lambda_{14}^{(2)}(4)]^{(11)},$$

for component $E_{21}^{(2)}$

$$[s_{21}^{(2)}(t,\cdot)]^{(11)} = [1, [s_{21}^{(2)}(t,1)]^{(11)}, [s_{21}^{(2)}(t,2)]^{(11)}, [s_{21}^{(2)}(t,3)]^{(11)}, [s_{21}^{(2)}(t,4)]^{(11)}]$$

coordinates

$$[s_{21}^{(2)}(t,1)]^{(11)} = \exp[-[\lambda_{21}^{(2)}(1)]^{(11)} t],$$

$$[s_{21}^{(2)}(t,2)]^{(11)} = \exp[-[\lambda_{21}^{(2)}(2)]^{(11)} t],$$

$$[s_{21}^{(2)}(t,3)]^{(11)} = \exp[-[\lambda_{21}^{(2)}(3)]^{(11)} t],$$

$$[s_{21}^{(2)}(t,4)]^{(11)} = \exp[-[\lambda_{21}^{(2)}(4)]^{(11)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{21}^{(2)}(1)]^{(11)},\ [\lambda_{21}^{(2)}(2)]^{(11)},\ [\lambda_{21}^{(2)}(3)]^{(11)}, [\lambda_{21}^{(2)}(4)]^{(11)},$$

for component $E_{22}^{(2)}$

$$[s_{22}^{(2)}(t,\cdot)]^{(11)} = [1, [s_{22}^{(2)}(t,1)]^{(11)}, [s_{22}^{(2)}(t,2)]^{(11)}, [s_{22}^{(2)}(t,3)]^{(11)}, [s_{22}^{(2)}(t,4)]^{(11)}]$$

coordinates

$$[s_{22}^{(2)}(t,1)]^{(11)} = \exp[-[\lambda_{22}^{(2)}(1)]^{(11)} t],$$

$$[s_{22}^{(2)}(t,2)]^{(11)} = \exp[-[\lambda_{22}^{(2)}(2)]^{(11)} t],$$

$$[s_{22}^{(2)}(t,3)]^{(11)} = \exp[-[\lambda_{22}^{(2)}(3)]^{(11)} t],$$

$$[s_{22}^{(2)}(t,4)]^{(11)} = \exp[-[\lambda_{22}^{(2)}(4)]^{(11)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{22}^{(2)}(1)]^{(11)},\ [\lambda_{22}^{(2)}(2)]^{(11)},\ [\lambda_{22}^{(2)}(3)]^{(11)}, [\lambda_{22}^{(2)}(4)]^{(11)},$$

for component $E_{31}^{(2)}$

$$[s_{31}^{(2)}(t,\cdot)]^{(11)} = [1, [s_{31}^{(2)}(t,1)]^{(11)}, [s_{31}^{(2)}(t,2)]^{(11)}, [s_{31}^{(2)}(t,3)]^{(11)}, [s_{31}^{(2)}(t,4)]^{(11)}]$$

coordinates

$$[s_{31}^{(2)}(t,1)]^{(11)} = \exp[-[\lambda_{31}^{(2)}(1)]^{(11)} t],$$

$$[s_{31}^{(2)}(t,2)]^{(11)} = \exp[-[\lambda_{31}^{(2)}(2)]^{(11)} t],$$

$$[s_{31}^{(2)}(t,3)]^{(11)} = \exp[-[\lambda_{31}^{(2)}(3)]^{(11)} t],$$

$$[s_{31}^{(2)}(t,4)]^{(11)} = \exp[-[\lambda_{31}^{(2)}(4)]^{(11)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{31}^{(2)}(1)]^{(11)},\ [\lambda_{31}^{(2)}(2)]^{(11)},\ [\lambda_{31}^{(2)}(3)]^{(11)}, [\lambda_{31}^{(2)}(4)]^{(11)},$$

for component $E_{41}^{(2)}$

$$[s_{41}^{(2)}(t,\cdot)]^{(11)} = [1, [s_{41}^{(2)}(t,1)]^{(11)}, [s_{41}^{(2)}(t,2)]^{(11)}, [s_{41}^{(2)}(t,3)]^{(11)}, [s_{41}^{(2)}(t,4)]^{(11)}]$$

coordinates

$$[s_{41}^{(2)}(t,1)]^{(11)} = \exp[-[\lambda_{41}^{(2)}(1)]^{(11)} t],$$

$$[s_{41}^{(2)}(t,2)]^{(11)} = \exp[-[\lambda_{41}^{(2)}(2)]^{(11)} t],$$

$$[s_{41}^{(2)}(t,3)]^{(11)} = \exp[-[\lambda_{41}^{(2)}(3)]^{(11)} t],$$

$$[s_{41}^{(2)}(t,4)]^{(11)} = \exp[-[\lambda_{41}^{(2)}(4)]^{(11)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{41}^{(2)}(1)]^{(11)},\ [\lambda_{41}^{(2)}(2)]^{(11)},\ [\lambda_{41}^{(2)}(3)]^{(11)}, [\lambda_{41}^{(2)}(4)]^{(11)},$$

for component $E_{51}^{(2)}$

$$[s_{51}^{(2)}(t,\cdot)]^{(11)} = [1, [s_{51}^{(2)}(t,1)]^{(11)}, [s_{51}^{(2)}(t,2)]^{(11)}, [s_{51}^{(2)}(t,3)]^{(11)}, [s_{51}^{(2)}(t,4)]^{(11)}]$$

coordinates

$$[s_{51}^{(2)}(t,1)]^{(11)} = \exp[-[\lambda_{51}^{(2)}(1)]^{(11)} t],$$

$$[s_{41}^{(2)}(t,2)]^{(11)} = \exp[-[\lambda_{41}^{(2)}(2)]^{(11)} t],$$

$$[s_{51}^{(2)}(t,3)]^{(11)} = \exp[-[\lambda_{51}^{(2)}(3)]^{(11)} t],$$

$$[s_{51}^{(2)}(t,4)]^{(11)} = \exp[-[\lambda_{51}^{(2)}(4)]^{(11)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{51}^{(2)}(1)]^{(11)},\ [\lambda_{51}^{(2)}(2)]^{(11)},\ [\lambda_{51}^{(2)}(3)]^{(11)}, [\lambda_{51}^{(6)}(4)]^{(11)},$$

for component $E_{61}^{(2)}$

$$[s_{61}^{(2)}(t,\cdot)]^{(11)} = [1, [s_{61}^{(2)}(t,1)]^{(11)}, [s_{61}^{(2)}(t,2)]^{(11)}, [s_{61}^{(2)}(t,3)]^{(11)}, [s_{61}^{(2)}(t,4)]^{(11)}]$$

coordinates

$$[s_{61}^{(2)}(t,1)]^{(11)} = \exp[-[\lambda_{61}^{(2)}(1)]^{(11)} t],$$

$$[s_{61}^{(2)}(t,2)]^{(11)} = \exp[-[\lambda_{61}^{(2)}(2)]^{(11)} t],$$

$$[s_{61}^{(2)}(t,3)]^{(11)} = \exp[-[\lambda_{61}^{(2)}(3)]^{(11)} t],$$

$$[s_{61}^{(2)}(t,4)]^{(11)} = \exp[-[\lambda_{61}^{(2)}(4)]^{(11)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{61}^{(2)}(1)]^{(11)},\ [\lambda_{61}^{(2)}(2)]^{(11)},\ [\lambda_{61}^{(2)}(3)]^{(11)}, [\lambda_{61}^{(2)}(4)]^{(11)},$$

for component $E_{71}^{(2)}$

$$[s_{71}^{(2)}(t,\cdot)]^{(11)} = [1, [s_{71}^{(2)}(t,1)]^{(11)}, [s_{71}^{(2)}(t,2)]^{(11)}, [s_{71}^{(2)}(t,3)]^{(11)}, [s_{71}^{(2)}(t,4)]^{(11)}],$$

coordinates

$$[s_{71}^{(2)}(t,1)]^{(11)} = \exp[-[\lambda_{71}^{(2)}(1)]^{(11)}t],$$

$$[s_{71}^{(2)}(t,2)]^{(11)} = \exp[-[\lambda_{71}^{(2)}(2)]^{(11)}t],$$

$$[s_{71}^{(2)}(t,3)]^{(11)} = \exp[-[\lambda_{71}^{(2)}(3)]^{(11)}t],$$

$$[s_{71}^{(2)}(t,4)]^{(11)} = \exp[-[\lambda_{71}^{(2)}(4)]^{(11)}t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$$[\lambda_{71}^{(2)}(1)]^{(11)},\ [\lambda_{71}^{(2)}(2)]^{(11)},\ [\lambda_{71}^{(2)}(3)]^{(11)}, [\lambda_{71}^{(2)}(4)]^{(11)},$$

xii) at the system operation states z_{12}:

- the reliability functions of the subsystem S_1 components

for component $E_{11}^{(1)}$

$$[s_{11}^{(1)}(t,\cdot)]^{(12)} = [1, [s_{11}^{(1)}(t,1)]^{(12)}, [s_{11}^{(1)}(t,2)]^{(12)}, [s_{11}^{(1)}(t,3)]^{(12)}, [s_{11}^{(1)}(t,4)]^{(12)}]$$

coordinates

$$[s_{11}^{(1)}(t,1)]^{(12)} = \exp[-[\lambda_{11}^{(1)}(1)]^{(12)}t],$$

$$[s_{11}^{(1)}(t,2)]^{(12)} = \exp[-[\lambda_{11}^{(1)}(2)]^{(12)}t],$$

$$[s_{11}^{(1)}(t,3)]^{(12)} = \exp[-[\lambda_{11}^{(1)}(3)]^{(12)}t],$$

$$[s_{11}^{(1)}(t,4)]^{(12)} = \exp[-[\lambda_{11}^{(1)}(4)]^{(12)}t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$$[\lambda_{11}^{(1)}(1)]^{(12)},\ [\lambda_{11}^{(1)}(2)]^{(12)},\ [\lambda_{11}^{(1)}(3)]^{(12)}, [\lambda_{11}^{(1)}(4)]^{(12)},$$

- the reliability functions of the subsystem S_2 components

for component $E_{11}^{(2)}$

$$[s_{11}^{(2)}(t,\cdot)]^{(12)} = [1, [s_{11}^{(2)}(t,1)]^{(12)}, [s_{11}^{(2)}(t,2)]^{(12)}, [s_{11}^{(2)}(t,3)]^{(12)}, [s_{11}^{(2)}(t,4)]^{(12)}]$$

coordinates

$$[s_{11}^{(2)}(t,1)]^{(12)} = \exp[-[\lambda_{11}^{(2)}(1)]^{(12)}t],$$

$$[s_{11}^{(2)}(t,2)]^{(12)} = \exp[-[\lambda_{11}^{(2)}(2)]^{(12)}t],$$

$$[s_{11}^{(2)}(t,3)]^{(12)} = \exp[-[\lambda_{11}^{(2)}(3)]^{(12)}t],$$

$$[s_{11}^{(2)}(t,4)]^{(12)} = \exp[-[\lambda_{11}^{(2)}(4)]^{(12)}t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$$[\lambda_{11}^{(2)}(1)]^{(12)},\ [\lambda_{11}^{(2)}(2)]^{(12)},\ [\lambda_{11}^{(2)}(3)]^{(12)}, [\lambda_{11}^{(2)}(4)]^{(12)},$$

for component $E_{12}^{(2)}$

$$[s_{12}^{(2)}(t,\cdot)]^{(12)} = [1, [s_{12}^{(2)}(t,1)]^{(12)}, [s_{12}^{(2)}(t,2)]^{(12)}, [s_{12}^{(2)}(t,3)]^{(12)}, [s_{12}^{(2)}(t,4)]^{(12)}]$$

coordinates

$$[s_{12}^{(2)}(t,1)]^{(12)} = \exp[-[\lambda_{12}^{(2)}(1)]^{(12)}t],$$

$$[s_{12}^{(2)}(t,2)]^{(12)} = \exp[-[\lambda_{12}^{(2)}(2)]^{(12)}t],$$

$$[s_{12}^{(2)}(t,3)]^{(12)} = \exp[-[\lambda_{12}^{(2)}(3)]^{(12)}t],$$

$$[s_{12}^{(2)}(t,4)]^{(12)} = \exp[-[\lambda_{12}^{(2)}(4)]^{(12)}t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$$[\lambda_{12}^{(2)}(1)]^{(12)},\ [\lambda_{12}^{(2)}(2)]^{(12)},\ [\lambda_{12}^{(2)}(3)]^{(12)}, [\lambda_{12}^{(2)}(4)]^{(12)},$$

for component $E_{13}^{(2)}$

$$[s_{13}^{(2)}(t,\cdot)]^{(12)} = [1, [s_{13}^{(2)}(t,1)]^{(12)}, [s_{13}^{(2)}(t,2)]^{(12)}, [s_{13}^{(2)}(t,3)]^{(12)}, [s_{13}^{(2)}(t,4)]^{(12)}]$$

coordinates

$$[s_{13}^{(2)}(t,1)]^{(12)} = \exp[-[\lambda_{13}^{(2)}(1)]^{(12)}t],$$

$$[s_{13}^{(2)}(t,2)]^{(12)} = \exp[-[\lambda_{13}^{(2)}(2)]^{(12)}t],$$

$$[s_{13}^{(2)}(t,3)]^{(12)} = \exp[-[\lambda_{13}^{(2)}(3)]^{(12)}t],$$

$$[s_{13}^{(2)}(t,4)]^{(12)} = \exp[-[\lambda_{13}^{(2)}(4)]^{(12)}t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{13}^{(2)}(1)]^{(12)},\ [\lambda_{13}^{(2)}(2)]^{(12)},\ [\lambda_{13}^{(2)}(3)]^{(12)}, [\lambda_{13}^{(2)}(4)]^{(12)},$$

for component $E_{14}^{(2)}$

$$[s_{14}^{(2)}(t,\cdot)]^{(12)} = [1, [s_{14}^{(2)}(t,1)]^{(12)}, [s_{14}^{(2)}(t,2)]^{(12)}, [s_{14}^{(2)}(t,3)]^{(12)}, [s_{14}^{(2)}(t,4)]^{(12)}]$$

coordinates

$$[s_{14}^{(2)}(t,1)]^{(12)} = \exp[-[\lambda_{14}^{(2)}(1)]^{(12)} t],$$

$$[s_{14}^{(2)}(t,2)]^{(12)} = \exp[-[\lambda_{14}^{(2)}(2)]^{(12)} t],$$

$$[s_{14}^{(2)}(t,3)]^{(12)} = \exp[-[\lambda_{14}^{(2)}(3)]^{(12)} t],$$

$$[s_{14}^{(2)}(t,4)]^{(12)} = \exp[-[\lambda_{14}^{(2)}(4)]^{(12)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{14}^{(2)}(1)]^{(12)},\ [\lambda_{14}^{(2)}(2)]^{(12)},\ [\lambda_{14}^{(2)}(3)]^{(12)}, [\lambda_{14}^{(2)}(4)]^{(12)},$$

for component $E_{41}^{(2)}$

$$[s_{41}^{(2)}(t,\cdot)]^{(12)} = [1, [s_{41}^{(2)}(t,1)]^{(12)}, [s_{41}^{(2)}(t,2)]^{(12)}, [s_{41}^{(2)}(t,3)]^{(12)}, [s_{41}^{(2)}(t,4)]^{(12)}]$$

coordinates

$$[s_{41}^{(2)}(t,1)]^{(12)} = \exp[-[\lambda_{41}^{(2)}(1)]^{(12)} t],$$

$$[s_{41}^{(2)}(t,2)]^{(12)} = \exp[-[\lambda_{41}^{(2)}(2)]^{(12)} t],$$

$$[s_{41}^{(2)}(t,3)]^{(12)} = \exp[-[\lambda_{41}^{(2)}(3)]^{(12)} t],$$

$$[s_{41}^{(2)}(t,4)]^{(12)} = \exp[-[\lambda_{41}^{(2)}(4)]^{(12)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{41}^{(2)}(1)]^{(12)},\ [\lambda_{41}^{(2)}(2)]^{(12)},\ [\lambda_{41}^{(2)}(3)]^{(12)}, [\lambda_{41}^{(2)}(4)]^{(12)},$$

for component $E_{51}^{(2)}$

$$[s_{51}^{(2)}(t,\cdot)]^{(12)} = [1, [s_{51}^{(2)}(t,1)]^{(12)}, [s_{51}^{(2)}(t,2)]^{(12)}, [s_{51}^{(2)}(t,3)]^{(12)}, [s_{51}^{(2)}(t,4)]^{(12)}]$$

coordinates

$$[s_{51}^{(2)}(t,1)]^{(12)} = \exp[-[\lambda_{51}^{(2)}(1)]^{(12)} t],$$

$$[s_{41}^{(2)}(t,2)]^{(12)} = \exp[-[\lambda_{41}^{(2)}(2)]^{(12)} t],$$

$$[s_{51}^{(2)}(t,3)]^{(12)} = \exp[-[\lambda_{51}^{(2)}(3)]^{(12)} t],$$

$$[s_{51}^{(2)}(t,4)]^{(12)} = \exp[-[\lambda_{51}^{(2)}(4)]^{(12)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{51}^{(2)}(1)]^{(12)},\ [\lambda_{51}^{(2)}(2)]^{(12)},\ [\lambda_{51}^{(2)}(3)]^{(12)}, [\lambda_{51}^{(6)}(4)]^{(12)},$$

for component $E_{61}^{(2)}$

$$[s_{61}^{(2)}(t,\cdot)]^{(12)} = [1, [s_{61}^{(2)}(t,1)]^{(12)}, [s_{61}^{(2)}(t,2)]^{(12)}, [s_{61}^{(2)}(t,3)]^{(12)}, [s_{61}^{(2)}(t,4)]^{(12)}],$$

coordinates

$$[s_{61}^{(2)}(t,1)]^{(12)} = \exp[-[\lambda_{61}^{(2)}(1)]^{(12)} t],$$

$$[s_{61}^{(2)}(t,2)]^{(12)} = \exp[-[\lambda_{61}^{(2)}(2)]^{(12)} t],$$

$$[s_{61}^{(2)}(t,3)]^{(12)} = \exp[-[\lambda_{61}^{(2)}(3)]^{(12)} t],$$

$$[s_{61}^{(2)}(t,4)]^{(12)} = \exp[-[\lambda_{61}^{(2)}(4)]^{(12)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{61}^{(2)}(1)]^{(12)},\ [\lambda_{61}^{(2)}(2)]^{(12)},\ [\lambda_{61}^{(2)}(3)]^{(12)}, [\lambda_{61}^{(2)}(4)]^{(12)},$$

for component $E_{71}^{(2)}$

$$[s_{71}^{(2)}(t,\cdot)]^{(12)} = [1, [s_{71}^{(2)}(t,1)]^{(12)}, [s_{71}^{(2)}(t,2)]^{(12)}, [s_{71}^{(2)}(t,3)]^{(12)}, [s_{71}^{(2)}(t,4)]^{(12)}]$$

coordinates

$$[s_{71}^{(2)}(t,1)]^{(12)} = \exp[-[\lambda_{71}^{(2)}(1)]^{(12)} t],$$

$$[s_{71}^{(2)}(t,2)]^{(12)} = \exp[-[\lambda_{71}^{(2)}(2)]^{(12)} t],$$

$$[s_{71}^{(2)}(t,3)]^{(12)} = \exp[-[\lambda_{71}^{(2)}(3)]^{(12)} t],$$

$$[s_{71}^{(2)}(t,4)]^{(12)} = \exp[-[\lambda_{71}^{(2)}(4)]^{(12)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{71}^{(2)}(1)]^{(12)},\ [\lambda_{71}^{(2)}(2)]^{(12)},\ [\lambda_{71}^{(2)}(3)]^{(12)}, [\lambda_{71}^{(2)}(4)]^{(12)},$$

- the reliability functions of the subsystem S_4 components

for component $E_{11}^{(4)}$

$$[s_{11}^{(4)}(t,\cdot)]^{(12)} = [1, [s_{11}^{(4)}(t,1)]^{(12)}, [s_{11}^{(4)}(t,2)]^{(12)}, [s_{11}^{(4)}(t,3)]^{(12)}, [s_{11}^{(4)}(t,4)]^{(12)}],$$

coordinates

$$[s_{11}^{(4)}(t,1)]^{(12)} = \exp[-[\lambda_{11}^{(4)}(1)]^{(12)} t],$$

$$[s_{11}^{(4)}(t,2)]^{(12)} = \exp[-[\lambda_{11}^{(4)}(2)]^{(12)} t],$$

$$[s_{11}^{(4)}(t,3)]^{(12)} = \exp[-[\lambda_{11}^{(4)}(3)]^{(12)} t],$$

$$[s_{11}^{(4)}(t,4)]^{(12)} = \exp[-[\lambda_{11}^{(4)}(4)]^{(12)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{11}^{(4)}(1)]^{(12)},\ [\lambda_{11}^{(4)}(2)]^{(12)},\ [\lambda_{11}^{(4)}(3)]^{(12)}, [\lambda_{11}^{(4)}(4)]^{(12)},$$

xiii) at the system operation states z_{13}:

- the reliability functions of the subsystem S_1 components

for component $E_{11}^{(1)}$

$$[s_{11}^{(1)}(t,\cdot)]^{(13)} = [1, [s_{11}^{(1)}(t,1)]^{(13)}, [s_{11}^{(1)}(t,2)]^{(13)}, [s_{11}^{(1)}(t,3)]^{(13)}, [s_{11}^{(1)}(t,4)]^{(13)}]$$

coordinates

$$[s_{11}^{(1)}(t,1)]^{(13)} = \exp[-[\lambda_{11}^{(1)}(1)]^{(13)} t],$$

$$[s_{11}^{(1)}(t,2)]^{(13)} = \exp[-[\lambda_{11}^{(1)}(2)]^{(13)} t],$$

$$[s_{11}^{(1)}(t,3)]^{(13)} = \exp[-[\lambda_{11}^{(1)}(3)]^{(13)} t],$$

$$[s_{11}^{(1)}(t,4)]^{(13)} = \exp[-[\lambda_{11}^{(1)}(4)]^{(13)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{11}^{(1)}(1)]^{(13)},\ [\lambda_{11}^{(1)}(2)]^{(13)},\ [\lambda_{11}^{(1)}(3)]^{(13)}, [\lambda_{11}^{(1)}(4)]^{(13)},$$

- the reliability functions of the subsystem S_2 components

for component $E_{11}^{(2)}$

$$[s_{11}^{(2)}(t,\cdot)]^{(13)} = [1, [s_{11}^{(2)}(t,1)]^{(13)}, [s_{11}^{(2)}(t,2)]^{(13)}, [s_{11}^{(2)}(t,3)]^{(13)}, [s_{11}^{(2)}(t,4)]^{(13)}]$$

coordinates

$$[s_{11}^{(2)}(t,1)]^{(13)} = \exp[-[\lambda_{11}^{(2)}(1)]^{(13)} t],$$

$$[s_{11}^{(2)}(t,2)]^{(13)} = \exp[-[\lambda_{11}^{(2)}(2)]^{(13)} t],$$

$$[s_{11}^{(2)}(t,3)]^{(13)} = \exp[-[\lambda_{11}^{(2)}(3)]^{(13)} t],$$

$$[s_{11}^{(2)}(t,4)]^{(13)} = \exp[-[\lambda_{11}^{(2)}(4)]^{(13)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{11}^{(2)}(1)]^{(13)},\ [\lambda_{11}^{(2)}(2)]^{(13)},\ [\lambda_{11}^{(2)}(3)]^{(13)}, [\lambda_{11}^{(2)}(4)]^{(13)},$$

for component $E_{12}^{(2)}$

$$[s_{12}^{(2)}(t,\cdot)]^{(13)} = [1, [s_{12}^{(2)}(t,1)]^{(13)}, [s_{12}^{(2)}(t,2)]^{(13)}, [s_{12}^{(2)}(t,3)]^{(13)}, [s_{12}^{(2)}(t,4)]^{(13)}],$$

coordinates

$$[s_{12}^{(2)}(t,1)]^{(13)} = \exp[-[\lambda_{12}^{(2)}(1)]^{(13)} t],$$

$$[s_{12}^{(2)}(t,2)]^{(13)} = \exp[-[\lambda_{12}^{(2)}(2)]^{(13)} t],$$

$$[s_{12}^{(2)}(t,3)]^{(13)} = \exp[-[\lambda_{12}^{(2)}(3)]^{(13)} t],$$

$$[s_{12}^{(2)}(t,4)]^{(13)} = \exp[-[\lambda_{12}^{(2)}(4)]^{(13)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{12}^{(2)}(1)]^{(13)},\ [\lambda_{12}^{(2)}(2)]^{(13)},\ [\lambda_{12}^{(2)}(3)]^{(13)}, [\lambda_{12}^{(2)}(4)]^{(13)},$$

for component $E_{13}^{(2)}$

$$[s_{13}^{(2)}(t,\cdot)]^{(13)} = [1, [s_{13}^{(2)}(t,1)]^{(13)}, [s_{13}^{(2)}(t,2)]^{(13)}, [s_{13}^{(2)}(t,3)]^{(13)}, [s_{13}^{(2)}(t,4)]^{(13)}],$$

coordinates

$$[s_{13}^{(2)}(t,1)]^{(13)} = \exp[-[\lambda_{13}^{(2)}(1)]^{(13)} t],$$

$$[s_{13}^{(2)}(t,2)]^{(13)} = \exp[-[\lambda_{13}^{(2)}(2)]^{(13)} t],$$

$$[s_{13}^{(2)}(t,3)]^{(13)} = \exp[-[\lambda_{13}^{(2)}(3)]^{(13)} t],$$

$$[s_{13}^{(2)}(t,4)]^{(13)} = \exp[-[\lambda_{13}^{(2)}(4)]^{(13)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{13}^{(2)}(1)]^{(13)},\ [\lambda_{13}^{(2)}(2)]^{(13)},\ [\lambda_{13}^{(2)}(3)]^{(13)}, [\lambda_{13}^{(2)}(4)]^{(13)},$$

for component $E_{14}^{(2)}$

$$[s_{14}^{(2)}(t,\cdot)]^{(13)} = [1, [s_{14}^{(2)}(t,1)]^{(13)}, [s_{14}^{(2)}(t,2)]^{(13)}, [s_{14}^{(2)}(t,3)]^{(13)}, [s_{14}^{(2)}(t,4)]^{(13)}]$$

coordinates

$$[s_{14}^{(2)}(t,1)]^{(13)} = \exp[-[\lambda_{14}^{(2)}(1)]^{(13)} t],$$

$$[s_{14}^{(2)}(t,2)]^{(13)} = \exp[-[\lambda_{14}^{(2)}(2)]^{(13)} t],$$

$$[s_{14}^{(2)}(t,3)]^{(13)} = \exp[-[\lambda_{14}^{(2)}(3)]^{(13)} t],$$

$$[s_{14}^{(2)}(t,4)]^{(13)} = \exp[-[\lambda_{14}^{(2)}(4)]^{(13)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{14}^{(2)}(1)]^{(13)},\ [\lambda_{14}^{(2)}(2)]^{(13)},\ [\lambda_{14}^{(2)}(3)]^{(13)}, [\lambda_{14}^{(2)}(4)]^{(13)},$$

for component $E_{41}^{(2)}$

$$[s_{41}^{(2)}(t,\cdot)]^{(13)} = [1, [s_{41}^{(2)}(t,1)]^{(13)}, [s_{41}^{(2)}(t,2)]^{(13)}, [s_{41}^{(2)}(t,3)]^{(13)}, [s_{41}^{(2)}(t,4)]^{(13)}]$$

coordinates

$$[s_{41}^{(2)}(t,1)]^{(13)} = \exp[-[\lambda_{41}^{(2)}(1)]^{(13)} t],$$

$$[s_{41}^{(2)}(t,2)]^{(13)} = \exp[-[\lambda_{41}^{(2)}(2)]^{(13)} t],$$

$$[s_{41}^{(2)}(t,3)]^{(13)} = \exp[-[\lambda_{41}^{(2)}(3)]^{(13)} t],$$

$$[s_{41}^{(2)}(t,4)]^{(13)} = \exp[-[\lambda_{41}^{(2)}(4)]^{(13)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{41}^{(2)}(1)]^{(13)},\ [\lambda_{41}^{(2)}(2)]^{(13)},\ [\lambda_{41}^{(2)}(3)]^{(13)}, [\lambda_{41}^{(2)}(4)]^{(13)},$$

for component $E_{51}^{(2)}$

$$[s_{51}^{(2)}(t,\cdot)]^{(13)} = [1, [s_{51}^{(2)}(t,1)]^{(13)}, [s_{51}^{(2)}(t,2)]^{(13)}, [s_{51}^{(2)}(t,3)]^{(13)}, [s_{51}^{(2)}(t,4)]^{(13)}]$$

coordinates

$$[s_{51}^{(2)}(t,1)]^{(13)} = \exp[-[\lambda_{51}^{(2)}(1)]^{(13)} t],$$

$$[s_{41}^{(2)}(t,2)]^{(13)} = \exp[-[\lambda_{41}^{(2)}(2)]^{(13)} t],$$

$$[s_{51}^{(2)}(t,3)]^{(13)} = \exp[-[\lambda_{51}^{(2)}(3)]^{(13)} t],$$

$$[s_{51}^{(2)}(t,4)]^{(13)} = \exp[-[\lambda_{51}^{(2)}(4)]^{(13)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{51}^{(2)}(1)]^{(13)},\ [\lambda_{51}^{(2)}(2)]^{(13)},\ [\lambda_{51}^{(2)}(3)]^{(13)}, [\lambda_{51}^{(6)}(4)]^{(13)},$$

for component $E_{61}^{(2)}$

$$[s_{61}^{(2)}(t,\cdot)]^{(13)} = [1, [s_{61}^{(2)}(t,1)]^{(13)}, [s_{61}^{(2)}(t,2)]^{(13)}, [s_{61}^{(2)}(t,3)]^{(13)}, [s_{61}^{(2)}(t,4)]^{(13)}]$$

coordinates

$$[s_{61}^{(2)}(t,1)]^{(13)} = \exp[-[\lambda_{61}^{(2)}(1)]^{(13)} t],$$

$$[s_{61}^{(2)}(t,2)]^{(13)} = \exp[-[\lambda_{61}^{(2)}(2)]^{(13)} t],$$

$$[s_{61}^{(2)}(t,3)]^{(13)} = \exp[-[\lambda_{61}^{(2)}(3)]^{(13)} t],$$

$$[s_{61}^{(2)}(t,4)]^{(13)} = \exp[-[\lambda_{61}^{(2)}(4)]^{(13)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{61}^{(2)}(1)]^{(13)},\ [\lambda_{61}^{(2)}(2)]^{(13)},\ [\lambda_{61}^{(2)}(3)]^{(13)}, [\lambda_{61}^{(2)}(4)]^{(13)},$$

for component $E_{71}^{(2)}$

$$[s_{71}^{(2)}(t,\cdot)]^{(13)} = [1, [s_{71}^{(2)}(t,1)]^{(13)}, [s_{71}^{(2)}(t,2)]^{(13)}, [s_{71}^{(2)}(t,3)]^{(13)}, [s_{71}^{(2)}(t,4)]^{(13)}]$$

coordinates

$$[s_{71}^{(2)}(t,1)]^{(13)} = \exp[-[\lambda_{71}^{(2)}(1)]^{(13)}t],$$

$$[s_{71}^{(2)}(t,2)]^{(13)} = \exp[-[\lambda_{71}^{(2)}(2)]^{(13)}t],$$

$$[s_{71}^{(2)}(t,3)]^{(13)} = \exp[-[\lambda_{71}^{(2)}(3)]^{(13)}t],$$

$$[s_{71}^{(2)}(t,4)]^{(13)} = \exp[-[\lambda_{71}^{(2)}(4)]^{(13)}t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$$[\lambda_{71}^{(2)}(1)]^{(13)},\ [\lambda_{71}^{(2)}(2)]^{(13)},\ [\lambda_{71}^{(2)}(3)]^{(13)}, [\lambda_{71}^{(2)}(4)]^{(13)},$$

- the reliability functions of the subsystem S_4 components

for component $E_{11}^{(4)}$

$$[s_{11}^{(4)}(t,\cdot)]^{(13)} = [1, [s_{11}^{(4)}(t,1)]^{(13)}, [s_{11}^{(4)}(t,2)]^{(13)}, [s_{11}^{(4)}(t,3)]^{(13)}, [s_{11}^{(4)}(t,4)]^{(13)}]$$

coordinates

$$[s_{11}^{(4)}(t,1)]^{(13)} = \exp[-[\lambda_{11}^{(4)}(1)]^{(13)}t],$$

$$[s_{11}^{(4)}(t,2)]^{(13)} = \exp[-[\lambda_{11}^{(4)}(2)]^{(13)}t],$$

$$[s_{11}^{(4)}(t,3)]^{(13)} = \exp[-[\lambda_{11}^{(4)}(3)]^{(13)}t],$$

$$[s_{11}^{(4)}(t,4)]^{(13)} = \exp[-[\lambda_{11}^{(4)}(4)]^{(13)}t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$$[\lambda_{11}^{(4)}(1)]^{(13)},\ [\lambda_{11}^{(4)}(2)]^{(13)},\ [\lambda_{11}^{(4)}(3)]^{(13)}, [\lambda_{11}^{(4)}(4)]^{(13)},$$

xiv) at the system operation states z_{14}:

- the reliability functions of the subsystem S_1 components

for component $E_{11}^{(1)}$

$$[s_{11}^{(1)}(t,\cdot)]^{(14)} = [1, [s_{11}^{(1)}(t,1)]^{(14)}, [s_{11}^{(1)}(t,2)]^{(14)}, [s_{11}^{(1)}(t,3)]^{(14)}, [s_{11}^{(1)}(t,4)]^{(14)}]$$

coordinates

$$[s_{11}^{(1)}(t,1)]^{(14)} = \exp[-[\lambda_{11}^{(1)}(1)]^{(14)}t],$$

$$[s_{11}^{(1)}(t,2)]^{(14)} = \exp[-[\lambda_{11}^{(1)}(2)]^{(14)}t],$$

$$[s_{11}^{(1)}(t,3)]^{(14)} = \exp[-[\lambda_{11}^{(1)}(3)]^{(14)}t],$$

$$[s_{11}^{(1)}(t,4)]^{(14)} = \exp[-[\lambda_{11}^{(1)}(4)]^{(14)}t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$$[\lambda_{11}^{(1)}(1)]^{(14)},\ [\lambda_{11}^{(1)}(2)]^{(14)},\ [\lambda_{11}^{(1)}(3)]^{(14)}, [\lambda_{11}^{(1)}(4)]^{(14)},$$

- the reliability functions of the subsystem S_2 components

for component $E_{11}^{(2)}$

$$[s_{11}^{(2)}(t,\cdot)]^{(14)} = [1, [s_{11}^{(2)}(t,1)]^{(14)}, [s_{11}^{(2)}(t,2)]^{(14)}, [s_{11}^{(2)}(t,3)]^{(14)}, [s_{11}^{(2)}(t,4)]^{(14)}]$$

coordinates

$$[s_{11}^{(2)}(t,1)]^{(14)} = \exp[-[\lambda_{11}^{(2)}(1)]^{(14)}t],$$

$$[s_{11}^{(2)}(t,2)]^{(14)} = \exp[-[\lambda_{11}^{(2)}(2)]^{(14)}t],$$

$$[s_{11}^{(2)}(t,3)]^{(14)} = \exp[-[\lambda_{11}^{(2)}(3)]^{(14)}t],$$

$$[s_{11}^{(2)}(t,4)]^{(14)} = \exp[-[\lambda_{11}^{(2)}(4)]^{(14)}t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$$[\lambda_{11}^{(2)}(1)]^{(14)},\ [\lambda_{11}^{(2)}(2)]^{(14)},\ [\lambda_{11}^{(2)}(3)]^{(14)}, [\lambda_{11}^{(2)}(4)]^{(14)},$$

for component $E_{12}^{(2)}$

$$[s_{12}^{(2)}(t,\cdot)]^{(14)} = [1, [s_{12}^{(2)}(t,1)]^{(14)}, [s_{12}^{(2)}(t,2)]^{(14)}, [s_{12}^{(2)}(t,3)]^{(14)}, [s_{12}^{(2)}(t,4)]^{(14)}]$$

coordinates

$$[s_{12}^{(2)}(t,1)]^{(14)} = \exp[-[\lambda_{12}^{(2)}(1)]^{(14)}t],$$

$$[s_{12}^{(2)}(t,2)]^{(14)} = \exp[-[\lambda_{12}^{(2)}(2)]^{(14)}t],$$

$$[s_{12}^{(2)}(t,3)]^{(14)} = \exp[-[\lambda_{12}^{(2)}(3)]^{(14)}t],$$

$$[s_{12}^{(2)}(t,4)]^{(14)} = \exp[-[\lambda_{12}^{(2)}(4)]^{(14)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{12}^{(2)}(1)]^{(14)},\ [\lambda_{12}^{(2)}(2)]^{(14)},\ [\lambda_{12}^{(2)}(3)]^{(14)}, [\lambda_{12}^{(2)}(4)]^{(14)},$$

for component $E_{13}^{(2)}$

$$[s_{13}^{(2)}(t,\cdot)]^{(14)} = [1, [s_{13}^{(2)}(t,1)]^{(14)}, [s_{13}^{(2)}(t,2)]^{(14)}, [s_{13}^{(2)}(t,3)]^{(14)}, [s_{13}^{(2)}(t,4)]^{(14)}]$$

coordinates

$$[s_{13}^{(2)}(t,1)]^{(14)} = \exp[-[\lambda_{13}^{(2)}(1)]^{(14)} t],$$

$$[s_{13}^{(2)}(t,2)]^{(14)} = \exp[-[\lambda_{13}^{(2)}(2)]^{(14)} t],$$

$$[s_{13}^{(2)}(t,3)]^{(14)} = \exp[-[\lambda_{13}^{(2)}(3)]^{(14)} t],$$

$$[s_{13}^{(2)}(t,4)]^{(14)} = \exp[-[\lambda_{13}^{(2)}(4)]^{(14)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{13}^{(2)}(1)]^{(14)},\ [\lambda_{13}^{(2)}(2)]^{(14)},\ [\lambda_{13}^{(2)}(3)]^{(14)}, [\lambda_{13}^{(2)}(4)]^{(14)},$$

for component $E_{14}^{(2)}$

$$[s_{14}^{(2)}(t,\cdot)]^{(14)} = [1, [s_{14}^{(2)}(t,1)]^{(14)}, [s_{14}^{(2)}(t,2)]^{(14)}, [s_{14}^{(2)}(t,3)]^{(14)}, [s_{14}^{(2)}(t,4)]^{(14)}]$$

coordinates

$$[s_{14}^{(2)}(t,1)]^{(14)} = \exp[-[\lambda_{14}^{(2)}(1)]^{(14)} t],$$

$$[s_{14}^{(2)}(t,2)]^{(14)} = \exp[-[\lambda_{14}^{(2)}(2)]^{(14)} t],$$

$$[s_{14}^{(2)}(t,3)]^{(14)} = \exp[-[\lambda_{14}^{(2)}(3)]^{(14)} t],$$

$$[s_{14}^{(2)}(t,4)]^{(14)} = \exp[-[\lambda_{14}^{(2)}(4)]^{(14)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{14}^{(2)}(1)]^{(14)},\ [\lambda_{14}^{(2)}(2)]^{(14)},\ [\lambda_{14}^{(2)}(3)]^{(14)}, [\lambda_{14}^{(2)}(4)]^{(14)},$$

for component $E_{41}^{(2)}$

$$[s_{41}^{(2)}(t,\cdot)]^{(14)} = [1, [s_{41}^{(2)}(t,1)]^{(14)}, [s_{41}^{(2)}(t,2)]^{(14)}, [s_{41}^{(2)}(t,3)]^{(14)}, [s_{41}^{(2)}(t,4)]^{(14)}]$$

coordinates

$$[s_{41}^{(2)}(t,1)]^{(14)} = \exp[-[\lambda_{41}^{(2)}(1)]^{(14)} t],$$

$$[s_{41}^{(2)}(t,2)]^{(14)} = \exp[-[\lambda_{41}^{(2)}(2)]^{(14)} t],$$

$$[s_{41}^{(2)}(t,3)]^{(14)} = \exp[-[\lambda_{41}^{(2)}(3)]^{(14)} t],$$

$$[s_{41}^{(2)}(t,4)]^{(14)} = \exp[-[\lambda_{41}^{(2)}(4)]^{(14)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{41}^{(2)}(1)]^{(14)},\ [\lambda_{41}^{(2)}(2)]^{(14)},\ [\lambda_{41}^{(2)}(3)]^{(14)}, [\lambda_{41}^{(2)}(4)]^{(14)},$$

for component $E_{51}^{(2)}$

$$[s_{51}^{(2)}(t,\cdot)]^{(14)} = [1, [s_{51}^{(2)}(t,1)]^{(14)}, [s_{51}^{(2)}(t,2)]^{(14)}, [s_{51}^{(2)}(t,3)]^{(14)}, [s_{51}^{(2)}(t,4)]^{(14)}]$$

coordinates

$$[s_{51}^{(2)}(t,1)]^{(14)} = \exp[-[\lambda_{51}^{(2)}(1)]^{(14)} t],$$

$$[s_{41}^{(2)}(t,2)]^{(14)} = \exp[-[\lambda_{41}^{(2)}(2)]^{(14)} t],$$

$$[s_{51}^{(2)}(t,3)]^{(14)} = \exp[-[\lambda_{51}^{(2)}(3)]^{(14)} t],$$

$$[s_{51}^{(2)}(t,4)]^{(14)} = \exp[-[\lambda_{51}^{(2)}(4)]^{(14)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{51}^{(2)}(1)]^{(14)},\ [\lambda_{51}^{(2)}(2)]^{(14)},\ [\lambda_{51}^{(2)}(3)]^{(14)}, [\lambda_{51}^{(6)}(4)]^{(14)},$$

for component $E_{61}^{(2)}$

$$[s_{61}^{(2)}(t,\cdot)]^{(14)} = [1, [s_{61}^{(2)}(t,1)]^{(14)}, [s_{61}^{(2)}(t,2)]^{(14)}, [s_{61}^{(2)}(t,3)]^{(14)}, [s_{61}^{(2)}(t,4)]^{(14)}]$$

coordinates

$$[s_{61}^{(2)}(t,1)]^{(14)} = \exp[-[\lambda_{61}^{(2)}(1)]^{(14)} t],$$

$$[s_{61}^{(2)}(t,2)]^{(14)} = \exp[-[\lambda_{61}^{(2)}(2)]^{(14)} t],$$

$$[s_{61}^{(2)}(t,3)]^{(14)} = \exp[-[\lambda_{61}^{(2)}(3)]^{(14)} t],$$

$$[s_{61}^{(2)}(t,4)]^{(14)} = \exp[-[\lambda_{61}^{(2)}(4)]^{(14)} t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$$[\lambda_{61}^{(2)}(1)]^{(14)},\ [\lambda_{61}^{(2)}(2)]^{(14)},\ [\lambda_{61}^{(2)}(3)]^{(14)}, [\lambda_{61}^{(2)}(4)]^{(14)},$$

for component $E_{71}^{(2)}$

$$[s_{71}^{(2)}(t,\cdot)]^{(14)} = [1, [s_{71}^{(2)}(t,1)]^{(14)}, [s_{71}^{(2)}(t,2)]^{(14)}, [s_{71}^{(2)}(t,3)]^{(14)}, [s_{71}^{(2)}(t,4)]^{(14)}]$$

coordinates

$$[s_{71}^{(2)}(t,1)]^{(14)} = \exp[-[\lambda_{71}^{(2)}(1)]^{(14)} t],$$

$$[s_{71}^{(2)}(t,2)]^{(14)} = \exp[-[\lambda_{71}^{(2)}(2)]^{(14)} t],$$

$$[s_{71}^{(2)}(t,3)]^{(14)} = \exp[-[\lambda_{71}^{(2)}(3)]^{(14)} t],$$

$$[s_{71}^{(2)}(t,4)]^{(14)} = \exp[-[\lambda_{71}^{(2)}(4)]^{(14)} t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$$[\lambda_{71}^{(2)}(1)]^{(14)},\ [\lambda_{71}^{(2)}(2)]^{(14)},\ [\lambda_{71}^{(2)}(3)]^{(14)}, [\lambda_{71}^{(2)}(4)]^{(14)},$$

- the reliability functions of the subsystem S_4 components

for component $E_{11}^{(4)}$

$$[s_{11}^{(4)}(t,\cdot)]^{(14)} = [1, [s_{11}^{(4)}(t,1)]^{(14)}, [s_{11}^{(4)}(t,2)]^{(14)}, [s_{11}^{(4)}(t,3)]^{(14)}, [s_{11}^{(4)}(t,4)]^{(14)}]$$

coordinates

$$[s_{11}^{(4)}(t,1)]^{(14)} = \exp[-[\lambda_{11}^{(4)}(1)]^{(14)} t],$$

$$[s_{11}^{(4)}(t,2)]^{(14)} = \exp[-[\lambda_{11}^{(4)}(2)]^{(14)} t],$$

$$[s_{11}^{(4)}(t,3)]^{(14)} = \exp[-[\lambda_{11}^{(4)}(3)]^{(14)} t],$$

$$[s_{11}^{(4)}(t,4)]^{(14)} = \exp[-[\lambda_{11}^{(4)}(4)]^{(14)} t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$$[\lambda_{11}^{(4)}(1)]^{(14)},\ [\lambda_{11}^{(4)}(2)]^{(14)},\ [\lambda_{11}^{(4)}(3)]^{(14)}, [\lambda_{11}^{(4)}(4)]^{(14)},$$

xv) at the system operation states z_{15}:

- the reliability functions of the subsystem S_1 components

for component $E_{11}^{(1)}$

$$[s_{11}^{(1)}(t,\cdot)]^{(15)} = [1, [s_{11}^{(1)}(t,1)]^{(15)}, [s_{11}^{(1)}(t,2)]^{(15)}, [s_{11}^{(1)}(t,3)]^{(15)}, [s_{11}^{(1)}(t,4)]^{(15)}]$$

coordinates

$$[s_{11}^{(1)}(t,1)]^{(15)} = \exp[-[\lambda_{11}^{(1)}(1)]^{(15)} t],$$

$$[s_{11}^{(1)}(t,2)]^{(15)} = \exp[-[\lambda_{11}^{(1)}(2)]^{(15)} t],$$

$$[s_{11}^{(1)}(t,3)]^{(15)} = \exp[-[\lambda_{11}^{(1)}(3)]^{(15)} t],$$

$$[s_{11}^{(1)}(t,4)]^{(15)} = \exp[-[\lambda_{11}^{(1)}(4)]^{(15)} t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$$[\lambda_{11}^{(1)}(1)]^{(15)},\ [\lambda_{11}^{(1)}(2)]^{(15)},\ [\lambda_{11}^{(1)}(3)]^{(15)}, [\lambda_{11}^{(1)}(4)]^{(15)},$$

- the reliability functions of the subsystem S_2 components

for component $E_{11}^{(2)}$

$$[s_{11}^{(2)}(t,\cdot)]^{(15)} = [1, [s_{11}^{(2)}(t,1)]^{(15)}, [s_{11}^{(2)}(t,2)]^{(15)}, [s_{11}^{(2)}(t,3)]^{(15)}, [s_{11}^{(2)}(t,4)]^{(15)}]$$

coordinates

$$[s_{11}^{(2)}(t,1)]^{(15)} = \exp[-[\lambda_{11}^{(2)}(1)]^{(15)} t],$$

$$[s_{11}^{(2)}(t,2)]^{(15)} = \exp[-[\lambda_{11}^{(2)}(2)]^{(15)} t],$$

$$[s_{11}^{(2)}(t,3)]^{(15)} = \exp[-[\lambda_{11}^{(2)}(3)]^{(15)} t],$$

$$[s_{11}^{(2)}(t,4)]^{(15)} = \exp[-[\lambda_{11}^{(2)}(4)]^{(15)} t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$$[\lambda_{11}^{(2)}(1)]^{(15)},\ [\lambda_{11}^{(2)}(2)]^{(15)},\ [\lambda_{11}^{(2)}(3)]^{(15)}, [\lambda_{11}^{(2)}(4)]^{(15)},$$

for component $E_{12}^{(2)}$

$$[s_{12}^{(2)}(t,\cdot)]^{(15)} = [1,[s_{12}^{(2)}(t,1)]^{(15)},[s_{12}^{(2)}(t,2)]^{(15)},$$
$$[s_{12}^{(2)}(t,3)]^{(15)},[s_{12}^{(2)}(t,4)]^{(15)}]$$

coordinates

$$[s_{12}^{(2)}(t,1)]^{(15)} = \exp[-[\lambda_{12}^{(2)}(1)]^{(15)}t],$$

$$[s_{12}^{(2)}(t,2)]^{(15)} = \exp[-[\lambda_{12}^{(2)}(2)]^{(15)}t],$$

$$[s_{12}^{(2)}(t,3)]^{(15)} = \exp[-[\lambda_{12}^{(2)}(3)]^{(15)}t],$$

$$[s_{12}^{(2)}(t,4)]^{(15)} = \exp[-[\lambda_{12}^{(2)}(4)]^{(15)}t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{12}^{(2)}(1)]^{(15)},\ [\lambda_{12}^{(2)}(2)]^{(15)},\ [\lambda_{12}^{(2)}(3)]^{(15)},[\lambda_{12}^{(2)}(4)]^{(15)},$$

for component $E_{13}^{(2)}$

$$[s_{13}^{(2)}(t,\cdot)]^{(15)} = [1,[s_{13}^{(2)}(t,1)]^{(15)},[s_{13}^{(2)}(t,2)]^{(15)},$$
$$[s_{13}^{(2)}(t,3)]^{(15)},[s_{13}^{(2)}(t,4)]^{(15)}]$$

coordinates

$$[s_{13}^{(2)}(t,1)]^{(15)} = \exp[-[\lambda_{13}^{(2)}(1)]^{(15)}t],$$

$$[s_{13}^{(2)}(t,2)]^{(15)} = \exp[-[\lambda_{13}^{(2)}(2)]^{(15)}t],$$

$$[s_{13}^{(2)}(t,3)]^{(15)} = \exp[-[\lambda_{13}^{(2)}(3)]^{(15)}t],$$

$$[s_{13}^{(2)}(t,4)]^{(15)} = \exp[-[\lambda_{13}^{(2)}(4)]^{(15)}t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{13}^{(2)}(1)]^{(15)},\ [\lambda_{13}^{(2)}(2)]^{(15)},\ [\lambda_{13}^{(2)}(3)]^{(15)},[\lambda_{13}^{(2)}(4)]^{(15)},$$

for component $E_{14}^{(2)}$

$$[s_{14}^{(2)}(t,\cdot)]^{(15)} = [1,[s_{14}^{(2)}(t,1)]^{(15)},[s_{14}^{(2)}(t,2)]^{(15)},$$
$$[s_{14}^{(2)}(t,3)]^{(15)},[s_{14}^{(2)}(t,4)]^{(15)}]$$

coordinates

$$[s_{14}^{(2)}(t,1)]^{(15)} = \exp[-[\lambda_{14}^{(2)}(1)]^{(15)}t],$$

$$[s_{14}^{(2)}(t,2)]^{(15)} = \exp[-[\lambda_{14}^{(2)}(2)]^{(15)}t],$$

$$[s_{14}^{(2)}(t,3)]^{(15)} = \exp[-[\lambda_{14}^{(2)}(3)]^{(15)}t],$$

$$[s_{14}^{(2)}(t,4)]^{(15)} = \exp[-[\lambda_{14}^{(2)}(4)]^{(15)}t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{14}^{(2)}(1)]^{(15)},\ [\lambda_{14}^{(2)}(2)]^{(15)},\ [\lambda_{14}^{(2)}(3)]^{(15)},[\lambda_{14}^{(2)}(4)]^{(15)},$$

for component $E_{21}^{(2)}$

$$[s_{21}^{(2)}(t,\cdot)]^{(15)} = [1,[s_{21}^{(2)}(t,1)]^{(15)},[s_{21}^{(2)}(t,2)]^{(15)},$$
$$[s_{21}^{(2)}(t,3)]^{(15)},[s_{21}^{(2)}(t,4)]^{(15)}]$$

coordinates

$$[s_{21}^{(2)}(t,1)]^{(15)} = \exp[-[\lambda_{21}^{(2)}(1)]^{(15)}t],$$

$$[s_{21}^{(2)}(t,2)]^{(15)} = \exp[-[\lambda_{21}^{(2)}(2)]^{(15)}t],$$

$$[s_{21}^{(2)}(t,3)]^{(15)} = \exp[-[\lambda_{21}^{(2)}(3)]^{(15)}t],$$

$$[s_{21}^{(2)}(t,4)]^{(15)} = \exp[-[\lambda_{21}^{(2)}(4)]^{(15)}t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{21}^{(2)}(1)]^{(15)},\ [\lambda_{21}^{(2)}(2)]^{(15)},\ [\lambda_{21}^{(2)}(3)]^{(15)},[\lambda_{21}^{(2)}(4)]^{(15)},$$

for component $E_{22}^{(2)}$

$$[s_{22}^{(2)}(t,\cdot)]^{(15)} = [1,[s_{22}^{(2)}(t,1)]^{(15)},[s_{22}^{(2)}(t,2)]^{(15)},$$
$$[s_{22}^{(2)}(t,3)]^{(15)},[s_{22}^{(2)}(t,4)]^{(15)}]$$

coordinates

$$[s_{22}^{(2)}(t,1)]^{(15)} = \exp[-[\lambda_{22}^{(2)}(1)]^{(15)}t],$$

$$[s_{22}^{(2)}(t,2)]^{(15)} = \exp[-[\lambda_{22}^{(2)}(2)]^{(15)}t],$$

$$[s_{22}^{(2)}(t,3)]^{(15)} = \exp[-[\lambda_{22}^{(2)}(3)]^{(15)}t],$$

$$[s_{22}^{(2)}(t,4)]^{(15)} = \exp[-[\lambda_{22}^{(2)}(4)]^{(15)}t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$[\lambda_{22}^{(2)}(1)]^{(15)}$, $[\lambda_{22}^{(2)}(2)]^{(15)}$, $[\lambda_{22}^{(2)}(3)]^{(15)}$, $[\lambda_{22}^{(2)}(4)]^{(15)}$,

for component $E_{31}^{(2)}$

$$[s_{31}^{(2)}(t,\cdot)]^{(15)} = [1,[s_{31}^{(2)}(t,1)]^{(15)},[s_{31}^{(2)}(t,2)]^{(15)},$$
$$[s_{31}^{(2)}(t,3)]^{(15)},[s_{31}^{(2)}(t,4)]^{(15)}]$$

coordinates

$$[s_{31}^{(2)}(t,1)]^{(15)} = \exp[-[\lambda_{31}^{(2)}(1)]^{(15)}t],$$

$$[s_{31}^{(2)}(t,2)]^{(15)} = \exp[-[\lambda_{31}^{(2)}(2)]^{(15)}t],$$

$$[s_{31}^{(2)}(t,3)]^{(15)} = \exp[-[\lambda_{31}^{(2)}(3)]^{(15)}t],$$

$$[s_{31}^{(2)}(t,4)]^{(15)} = \exp[-[\lambda_{31}^{(2)}(4)]^{(15)}t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$[\lambda_{31}^{(2)}(1)]^{(15)}$, $[\lambda_{31}^{(2)}(2)]^{(15)}$, $[\lambda_{31}^{(2)}(3)]^{(15)}$, $[\lambda_{31}^{(2)}(4)]^{(15)}$,

for component $E_{41}^{(2)}$

$$[s_{41}^{(2)}(t,\cdot)]^{(15)} = [1,[s_{41}^{(2)}(t,1)]^{(15)},[s_{41}^{(2)}(t,2)]^{(15)},$$
$$[s_{41}^{(2)}(t,3)]^{(15)},[s_{41}^{(2)}(t,4)]^{(15)}]$$

coordinates

$$[s_{41}^{(2)}(t,1)]^{(15)} = \exp[-[\lambda_{41}^{(2)}(1)]^{(15)}t],$$

$$[s_{41}^{(2)}(t,2)]^{(15)} = \exp[-[\lambda_{41}^{(2)}(2)]^{(15)}t],$$

$$[s_{41}^{(2)}(t,3)]^{(15)} = \exp[-[\lambda_{41}^{(2)}(3)]^{(15)}t],$$

$$[s_{41}^{(2)}(t,4)]^{(15)} = \exp[-[\lambda_{41}^{(2)}(4)]^{(15)}t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$[\lambda_{41}^{(2)}(1)]^{(15)}$, $[\lambda_{41}^{(2)}(2)]^{(15)}$, $[\lambda_{41}^{(2)}(3)]^{(15)}$, $[\lambda_{41}^{(2)}(4)]^{(15)}$,

for component $E_{51}^{(2)}$

$$[s_{51}^{(2)}(t,\cdot)]^{(15)} = [1,[s_{51}^{(2)}(t,1)]^{(15)},[s_{51}^{(2)}(t,2)]^{(15)},$$
$$[s_{51}^{(2)}(t,3)]^{(15)},[s_{51}^{(2)}(t,4)]^{(15)}]$$

coordinates

$$[s_{51}^{(2)}(t,1)]^{(15)} = \exp[-[\lambda_{51}^{(2)}(1)]^{(15)}t],$$

$$[s_{41}^{(2)}(t,2)]^{(15)} = \exp[-[\lambda_{41}^{(2)}(2)]^{(15)}t],$$

$$[s_{51}^{(2)}(t,3)]^{(15)} = \exp[-[\lambda_{51}^{(2)}(3)]^{(15)}t],$$

$$[s_{51}^{(2)}(t,4)]^{(15)} = \exp[-[\lambda_{51}^{(2)}(4)]^{(15)}t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$[\lambda_{51}^{(2)}(1)]^{(15)}$, $[\lambda_{51}^{(2)}(2)]^{(15)}$, $[\lambda_{51}^{(2)}(3)]^{(15)}$, $[\lambda_{51}^{(6)}(4)]^{(15)}$,

for component $E_{61}^{(2)}$

$$[s_{61}^{(2)}(t,\cdot)]^{(15)} = [1,[s_{61}^{(2)}(t,1)]^{(15)},[s_{61}^{(2)}(t,2)]^{(15)},$$
$$[s_{61}^{(2)}(t,3)]^{(15)},[s_{61}^{(2)}(t,4)]^{(15)}]$$

coordinates

$$[s_{61}^{(2)}(t,1)]^{(15)} = \exp[-[\lambda_{61}^{(2)}(1)]^{(15)}t],$$

$$[s_{61}^{(2)}(t,2)]^{(15)} = \exp[-[\lambda_{61}^{(2)}(2)]^{(15)}t],$$

$$[s_{61}^{(2)}(t,3)]^{(15)} = \exp[-[\lambda_{61}^{(2)}(3)]^{(15)}t],$$

$$[s_{61}^{(2)}(t,4)]^{(15)} = \exp[-[\lambda_{61}^{(2)}(4)]^{(15)}t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$[\lambda_{61}^{(2)}(1)]^{(15)}$, $[\lambda_{61}^{(2)}(2)]^{(15)}$, $[\lambda_{61}^{(2)}(3)]^{(15)}$, $[\lambda_{61}^{(2)}(4)]^{(15)}$,

for component $E_{71}^{(2)}$

$$[s_{71}^{(2)}(t,\cdot)]^{(15)} = [1,[s_{71}^{(2)}(t,1)]^{(15)},[s_{71}^{(2)}(t,2)]^{(15)},$$
$$[s_{71}^{(2)}(t,3)]^{(15)},[s_{71}^{(2)}(t,4)]^{(15)}]$$

coordinates

$$[s_{71}^{(2)}(t,1)]^{(15)} = \exp[-[\lambda_{71}^{(2)}(1)]^{(15)}t],$$

$$[s_{71}^{(2)}(t,2)]^{(15)} = \exp[-[\lambda_{71}^{(2)}(2)]^{(15)}t],$$

$$[s_{71}^{(2)}(t,3)]^{(15)} = \exp[-[\lambda_{71}^{(2)}(3)]^{(15)}t],$$

$$[s_{71}^{(2)}(t,4)]^{(15)} = \exp[-[\lambda_{71}^{(2)}(4)]^{(15)}t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$[\lambda_{71}^{(2)}(1)]^{(15)}$, $[\lambda_{71}^{(2)}(2)]^{(15)}$, $[\lambda_{71}^{(2)}(3)]^{(15)}$, $[\lambda_{71}^{(2)}(4)]^{(15)}$,

xvi) at the system operation states z_{16}:

- the reliability functions of the subsystem S_1 components

for component $E_{11}^{(1)}$

$$[s_{11}^{(1)}(t,\cdot)]^{(16)} = [1, [s_{11}^{(1)}(t,1)]^{(16)}, [s_{11}^{(1)}(t,2)]^{(16)}, [s_{11}^{(1)}(t,3)]^{(16)}, [s_{11}^{(1)}(t,4)]^{(16)}]$$

coordinates

$$[s_{11}^{(1)}(t,1)]^{(16)} = \exp[-[\lambda_{11}^{(1)}(1)]^{(16)} t],$$

$$[s_{11}^{(1)}(t,2)]^{(16)} = \exp[-[\lambda_{11}^{(1)}(2)]^{(16)} t],$$

$$[s_{11}^{(1)}(t,3)]^{(16)} = \exp[-[\lambda_{11}^{(1)}(3)]^{(16)} t],$$

$$[s_{11}^{(1)}(t,4)]^{(16)} = \exp[-[\lambda_{11}^{(1)}(4)]^{(16)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$[\lambda_{11}^{(1)}(1)]^{(16)}$, $[\lambda_{11}^{(1)}(2)]^{(16)}$, $[\lambda_{11}^{(1)}(3)]^{(16)}$, $[\lambda_{11}^{(1)}(4)]^{(16)}$,

- the reliability functions of the subsystem S_2 components

for component $E_{11}^{(2)}$

$$[s_{11}^{(2)}(t,\cdot)]^{(16)} = [1, [s_{11}^{(2)}(t,1)]^{(16)}, [s_{11}^{(2)}(t,2)]^{(16)}, [s_{11}^{(2)}(t,3)]^{(16)}, [s_{11}^{(2)}(t,4)]^{(16)}]$$

coordinates

$$[s_{11}^{(2)}(t,1)]^{(16)} = \exp[-[\lambda_{11}^{(2)}(1)]^{(16)} t],$$

$$[s_{11}^{(2)}(t,2)]^{(16)} = \exp[-[\lambda_{11}^{(2)}(2)]^{(16)} t],$$

$$[s_{11}^{(2)}(t,3)]^{(16)} = \exp[-[\lambda_{11}^{(2)}(3)]^{(16)} t],$$

$$[s_{11}^{(2)}(t,4)]^{(16)} = \exp[-[\lambda_{11}^{(2)}(4)]^{(16)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$[\lambda_{11}^{(2)}(1)]^{(16)}$, $[\lambda_{11}^{(2)}(2)]^{(16)}$, $[\lambda_{11}^{(2)}(3)]^{(16)}$, $[\lambda_{11}^{(2)}(4)]^{(16)}$,

for component $E_{12}^{(2)}$

$$[s_{12}^{(2)}(t,\cdot)]^{(16)} = [1, [s_{12}^{(2)}(t,1)]^{(16)}, [s_{12}^{(2)}(t,2)]^{(16)}, [s_{12}^{(2)}(t,3)]^{(16)}, [s_{12}^{(2)}(t,4)]^{(16)}]$$

coordinates

$$[s_{12}^{(2)}(t,1)]^{(16)} = \exp[-[\lambda_{12}^{(2)}(1)]^{(16)} t],$$

$$[s_{12}^{(2)}(t,2)]^{(16)} = \exp[-[\lambda_{12}^{(2)}(2)]^{(16)} t],$$

$$[s_{12}^{(2)}(t,3)]^{(16)} = \exp[-[\lambda_{12}^{(2)}(3)]^{(16)} t],$$

$$[s_{12}^{(2)}(t,4)]^{(16)} = \exp[-[\lambda_{12}^{(2)}(4)]^{(16)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$[\lambda_{12}^{(2)}(1)]^{(16)}$, $[\lambda_{12}^{(2)}(2)]^{(16)}$, $[\lambda_{12}^{(2)}(3)]^{(16)}$, $[\lambda_{12}^{(2)}(4)]^{(16)}$,

for component $E_{13}^{(2)}$

$$[s_{13}^{(2)}(t,\cdot)]^{(16)} = [1, [s_{13}^{(2)}(t,1)]^{(16)}, [s_{13}^{(2)}(t,2)]^{(16)}, [s_{13}^{(2)}(t,3)]^{(16)}, [s_{13}^{(2)}(t,4)]^{(16)}]$$

coordinates

$$[s_{13}^{(2)}(t,1)]^{(16)} = \exp[-[\lambda_{13}^{(2)}(1)]^{(16)} t],$$

$$[s_{13}^{(2)}(t,2)]^{(16)} = \exp[-[\lambda_{13}^{(2)}(2)]^{(16)} t],$$

$$[s_{13}^{(2)}(t,3)]^{(16)} = \exp[-[\lambda_{13}^{(2)}(3)]^{(16)} t],$$

$$[s_{13}^{(2)}(t,4)]^{(16)} = \exp[-[\lambda_{13}^{(2)}(4)]^{(16)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$[\lambda_{13}^{(2)}(1)]^{(16)}$, $[\lambda_{13}^{(2)}(2)]^{(16)}$, $[\lambda_{13}^{(2)}(3)]^{(16)}$, $[\lambda_{13}^{(2)}(4)]^{(16)}$,

for component $E_{14}^{(2)}$

$$[s_{14}^{(2)}(t,\cdot)]^{(16)} = [1, [s_{14}^{(2)}(t,1)]^{(16)}, [s_{14}^{(2)}(t,2)]^{(16)}, [s_{14}^{(2)}(t,3)]^{(16)}, [s_{14}^{(2)}(t,4)]^{(16)}]$$

coordinates

$$[s_{14}^{(2)}(t,1)]^{(16)} = \exp[-[\lambda_{14}^{(2)}(1)]^{(16)} t],$$

$$[s_{14}^{(2)}(t,2)]^{(16)} = \exp[-[\lambda_{14}^{(2)}(2)]^{(16)} t],$$

$$[s_{14}^{(2)}(t,3)]^{(16)} = \exp[-[\lambda_{14}^{(2)}(3)]^{(16)} t],$$

$$[s_{14}^{(2)}(t,4)]^{(16)} = \exp[-[\lambda_{14}^{(2)}(4)]^{(16)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{14}^{(2)}(1)]^{(16)},\ [\lambda_{14}^{(2)}(2)]^{(16)},\ [\lambda_{14}^{(2)}(3)]^{(16)}, [\lambda_{14}^{(2)}(4)]^{(16)},$$

for component $E_{21}^{(2)}$

$$[s_{21}^{(2)}(t,\cdot)]^{(16)} = [1, [s_{21}^{(2)}(t,1)]^{(16)}, [s_{21}^{(2)}(t,2)]^{(16)}, [s_{21}^{(2)}(t,3)]^{(16)}, [s_{21}^{(2)}(t,4)]^{(16)}]$$

coordinates

$$[s_{21}^{(2)}(t,1)]^{(16)} = \exp[-[\lambda_{21}^{(2)}(1)]^{(16)} t],$$

$$[s_{21}^{(2)}(t,2)]^{(16)} = \exp[-[\lambda_{21}^{(2)}(2)]^{(16)} t],$$

$$[s_{21}^{(2)}(t,3)]^{(16)} = \exp[-[\lambda_{21}^{(2)}(3)]^{(16)} t],$$

$$[s_{21}^{(2)}(t,4)]^{(16)} = \exp[-[\lambda_{21}^{(2)}(4)]^{(16)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{21}^{(2)}(1)]^{(16)},\ [\lambda_{21}^{(2)}(2)]^{(16)},\ [\lambda_{21}^{(2)}(3)]^{(16)}, [\lambda_{21}^{(2)}(4)]^{(16)},$$

for component $E_{22}^{(2)}$

$$[s_{22}^{(2)}(t,\cdot)]^{(16)} = [1, [s_{22}^{(2)}(t,1)]^{(16)}, [s_{22}^{(2)}(t,2)]^{(16)}, [s_{22}^{(2)}(t,3)]^{(16)}, [s_{22}^{(2)}(t,4)]^{(16)}]$$

coordinates

$$[s_{22}^{(2)}(t,1)]^{(16)} = \exp[-[\lambda_{22}^{(2)}(1)]^{(16)} t],$$

$$[s_{22}^{(2)}(t,2)]^{(16)} = \exp[-[\lambda_{22}^{(2)}(2)]^{(16)} t],$$

$$[s_{22}^{(2)}(t,3)]^{(16)} = \exp[-[\lambda_{22}^{(2)}(3)]^{(16)} t],$$

$$[s_{22}^{(2)}(t,4)]^{(16)} = \exp[-[\lambda_{22}^{(2)}(4)]^{(16)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{22}^{(2)}(1)]^{(16)},\ [\lambda_{22}^{(2)}(2)]^{(16)},\ [\lambda_{22}^{(2)}(3)]^{(16)}, [\lambda_{22}^{(2)}(4)]^{(16)},$$

for component $E_{31}^{(2)}$

$$[s_{31}^{(2)}(t,\cdot)]^{(16)} = [1, [s_{31}^{(2)}(t,1)]^{(16)}, [s_{31}^{(2)}(t,2)]^{(16)}, [s_{31}^{(2)}(t,3)]^{(16)}, [s_{31}^{(2)}(t,4)]^{(16)}]$$

coordinates

$$[s_{31}^{(2)}(t,1)]^{(16)} = \exp[-[\lambda_{31}^{(2)}(1)]^{(16)} t],$$

$$[s_{31}^{(2)}(t,2)]^{(16)} = \exp[-[\lambda_{31}^{(2)}(2)]^{(16)} t],$$

$$[s_{31}^{(2)}(t,3)]^{(16)} = \exp[-[\lambda_{31}^{(2)}(3)]^{(16)} t],$$

$$[s_{31}^{(2)}(t,4)]^{(16)} = \exp[-[\lambda_{31}^{(2)}(4)]^{(16)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{31}^{(2)}(1)]^{(16)},\ [\lambda_{31}^{(2)}(2)]^{(16)},\ [\lambda_{31}^{(2)}(3)]^{(16)}, [\lambda_{31}^{(2)}(4)]^{(16)},$$

for component $E_{41}^{(2)}$

$$[s_{41}^{(2)}(t,\cdot)]^{(16)} = [1, [s_{41}^{(2)}(t,1)]^{(16)}, [s_{41}^{(2)}(t,2)]^{(16)}, [s_{41}^{(2)}(t,3)]^{(16)}, [s_{41}^{(2)}(t,4)]^{(16)}]$$

coordinates

$$[s_{41}^{(2)}(t,1)]^{(16)} = \exp[-[\lambda_{41}^{(2)}(1)]^{(16)} t],$$

$$[s_{41}^{(2)}(t,2)]^{(16)} = \exp[-[\lambda_{41}^{(2)}(2)]^{(16)} t],$$

$$[s_{41}^{(2)}(t,3)]^{(16)} = \exp[-[\lambda_{41}^{(2)}(3)]^{(16)} t],$$

$$[s_{41}^{(2)}(t,4)]^{(16)} = \exp[-[\lambda_{41}^{(2)}(4)]^{(16)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{41}^{(2)}(1)]^{(16)},\ [\lambda_{41}^{(2)}(2)]^{(16)},\ [\lambda_{41}^{(2)}(3)]^{(16)}, [\lambda_{41}^{(2)}(4)]^{(16)},$$

for component $E_{51}^{(2)}$

$$[s_{51}^{(2)}(t,\cdot)]^{(16)} = [1, [s_{51}^{(2)}(t,1)]^{(16)}, [s_{51}^{(2)}(t,2)]^{(16)}, [s_{51}^{(2)}(t,3)]^{(16)}, [s_{51}^{(2)}(t,4)]^{(16)}]$$

coordinates

$$[s_{51}^{(2)}(t,1)]^{(16)} = \exp[-[\lambda_{51}^{(2)}(1)]^{(16)} t],$$

$$[s_{41}^{(2)}(t,2)]^{(16)} = \exp[-[\lambda_{41}^{(2)}(2)]^{(16)} t],$$

$$[s_{51}^{(2)}(t,3)]^{(16)} = \exp[-[\lambda_{51}^{(2)}(3)]^{(16)} t],$$

$$[s_{51}^{(2)}(t,4)]^{(16)} = \exp[-[\lambda_{51}^{(2)}(4)]^{(16)} t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$$[\lambda_{51}^{(2)}(1)]^{(16)},\ [\lambda_{51}^{(2)}(2)]^{(16)},\ [\lambda_{51}^{(2)}(3)]^{(16)}, [\lambda_{51}^{(6)}(4)]^{(16)},$$

for component $E_{61}^{(2)}$

$$[s_{61}^{(2)}(t,\cdot)]^{(16)} = [1, [s_{61}^{(2)}(t,1)]^{(16)}, [s_{61}^{(2)}(t,2)]^{(16)}, [s_{61}^{(2)}(t,3)]^{(16)}, [s_{61}^{(2)}(t,4)]^{(16)}]$$

coordinates

$$[s_{61}^{(2)}(t,1)]^{(16)} = \exp[-[\lambda_{61}^{(2)}(1)]^{(16)} t],$$

$$[s_{61}^{(2)}(t,2)]^{(16)} = \exp[-[\lambda_{61}^{(2)}(2)]^{(16)} t],$$

$$[s_{61}^{(2)}(t,3)]^{(16)} = \exp[-[\lambda_{61}^{(2)}(3)]^{(16)} t],$$

$$[s_{61}^{(2)}(t,4)]^{(16)} = \exp[-[\lambda_{61}^{(2)}(4)]^{(16)} t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$$[\lambda_{61}^{(2)}(1)]^{(16)},\ [\lambda_{61}^{(2)}(2)]^{(16)},\ [\lambda_{61}^{(2)}(3)]^{(16)}, [\lambda_{61}^{(2)}(4)]^{(16)},$$

for component $E_{71}^{(2)}$

$$[s_{71}^{(2)}(t,\cdot)]^{(16)} = [1, [s_{71}^{(2)}(t,1)]^{(16)}, [s_{71}^{(2)}(t,2)]^{(16)}, [s_{71}^{(2)}(t,3)]^{(16)}, [s_{71}^{(2)}(t,4)]^{(16)}]$$

coordinates

$$[s_{71}^{(2)}(t,1)]^{(16)} = \exp[-[\lambda_{71}^{(2)}(1)]^{(16)} t],$$

$$[s_{71}^{(2)}(t,2)]^{(16)} = \exp[-[\lambda_{71}^{(2)}(2)]^{(16)} t],$$

$$[s_{71}^{(2)}(t,3)]^{(16)} = \exp[-[\lambda_{71}^{(2)}(3)]^{(16)} t],$$

$$[s_{71}^{(2)}(t,4)]^{(16)} = \exp[-[\lambda_{71}^{(2)}(4)]^{(16)} t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$$[\lambda_{71}^{(2)}(1)]^{(16)},\ [\lambda_{71}^{(2)}(2)]^{(16)},\ [\lambda_{71}^{(2)}(3)]^{(16)}, [\lambda_{71}^{(2)}(4)]^{(16)},$$

xvii) at the system operation states z_{17}:

- the reliability functions of the subsystem S_1 components

for component $E_{11}^{(1)}$

$$[s_{11}^{(1)}(t,\cdot)]^{(17)} = [1, [s_{11}^{(1)}(t,1)]^{(17)}, [s_{11}^{(1)}(t,2)]^{(17)}, [s_{11}^{(1)}(t,3)]^{(17)}, [s_{11}^{(1)}(t,4)]^{(17)}]$$

coordinates

$$[s_{11}^{(1)}(t,1)]^{(17)} = \exp[-[\lambda_{11}^{(1)}(1)]^{(17)} t],$$

$$[s_{11}^{(1)}(t,2)]^{(17)} = \exp[-[\lambda_{11}^{(1)}(2)]^{(17)} t],$$

$$[s_{11}^{(1)}(t,3)]^{(17)} = \exp[-[\lambda_{11}^{(1)}(3)]^{(17)} t],$$

$$[s_{11}^{(1)}(t,4)]^{(17)} = \exp[-[\lambda_{11}^{(1)}(4)]^{(17)} t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$$[\lambda_{11}^{(1)}(1)]^{(17)},\ [\lambda_{11}^{(1)}(2)]^{(17)},\ [\lambda_{11}^{(1)}(3)]^{(17)}, [\lambda_{11}^{(1)}(4)]^{(17)},$$

- the reliability functions of the subsystem S_2 components

for component $E_{11}^{(2)}$

$$[s_{11}^{(2)}(t,\cdot)]^{(17)} = [1, [s_{11}^{(2)}(t,1)]^{(17)}, [s_{11}^{(2)}(t,2)]^{(17)}, [s_{11}^{(2)}(t,3)]^{(17)}, [s_{11}^{(2)}(t,4)]^{(17)}]$$

coordinates

$$[s_{11}^{(2)}(t,1)]^{(17)} = \exp[-[\lambda_{11}^{(2)}(1)]^{(17)} t],$$

$$[s_{11}^{(2)}(t,2)]^{(17)} = \exp[-[\lambda_{11}^{(2)}(2)]^{(17)} t],$$

$$[s_{11}^{(2)}(t,3)]^{(17)} = \exp[-[\lambda_{11}^{(2)}(3)]^{(17)} t],$$

$$[s_{11}^{(2)}(t,4)]^{(17)} = \exp[-[\lambda_{11}^{(2)}(4)]^{(17)} t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$$[\lambda_{11}^{(2)}(1)]^{(17)},\ [\lambda_{11}^{(2)}(2)]^{(17)},\ [\lambda_{11}^{(2)}(3)]^{(17)},[\lambda_{11}^{(2)}(4)]^{(17)},$$

for component $E_{12}^{(2)}$

$$[s_{12}^{(2)}(t,\cdot)]^{(17)}=[1,[s_{12}^{(2)}(t,1)]^{(17)},[s_{12}^{(2)}(t,2)]^{(17)},$$
$$[s_{12}^{(2)}(t,3)]^{(17)},[s_{12}^{(2)}(t,4)]^{(17)}]$$

coordinates

$$[s_{12}^{(2)}(t,1)]^{(17)}=\exp[-[\lambda_{12}^{(2)}(1)]^{(17)}t],$$

$$[s_{12}^{(2)}(t,2)]^{(17)}=\exp[-[\lambda_{12}^{(2)}(2)]^{(17)}t],$$

$$[s_{12}^{(2)}(t,3)]^{(17)}=\exp[-[\lambda_{12}^{(2)}(3)]^{(17)}t],$$

$$[s_{12}^{(2)}(t,4)]^{(17)}=\exp[-[\lambda_{12}^{(2)}(4)]^{(17)}t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$$[\lambda_{12}^{(2)}(1)]^{(17)},\ [\lambda_{12}^{(2)}(2)]^{(17)},\ [\lambda_{12}^{(2)}(3)]^{(17)},[\lambda_{12}^{(2)}(4)]^{(17)},$$

for component $E_{13}^{(2)}$

$$[s_{13}^{(2)}(t,\cdot)]^{(17)}=[1,[s_{13}^{(2)}(t,1)]^{(17)},[s_{13}^{(2)}(t,2)]^{(17)},$$
$$[s_{13}^{(2)}(t,3)]^{(17)},[s_{13}^{(2)}(t,4)]^{(17)}]$$

coordinates

$$[s_{13}^{(2)}(t,1)]^{(17)}=\exp[-[\lambda_{13}^{(2)}(1)]^{(17)}t],$$

$$[s_{13}^{(2)}(t,2)]^{(17)}=\exp[-[\lambda_{13}^{(2)}(2)]^{(17)}t],$$

$$[s_{13}^{(2)}(t,3)]^{(17)}=\exp[-[\lambda_{13}^{(2)}(3)]^{(17)}t],$$

$$[s_{13}^{(2)}(t,4)]^{(17)}=\exp[-[\lambda_{13}^{(2)}(4)]^{(17)}t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$$[\lambda_{13}^{(2)}(1)]^{(17)},\ [\lambda_{13}^{(2)}(2)]^{(17)},\ [\lambda_{13}^{(2)}(3)]^{(17)},[\lambda_{13}^{(2)}(4)]^{(17)},$$

for component $E_{14}^{(2)}$

$$[s_{14}^{(2)}(t,\cdot)]^{(17)}=[1,[s_{14}^{(2)}(t,1)]^{(17)},[s_{14}^{(2)}(t,2)]^{(17)},$$
$$[s_{14}^{(2)}(t,3)]^{(17)},[s_{14}^{(2)}(t,4)]^{(17)}]$$

coordinates

$$[s_{14}^{(2)}(t,1)]^{(17)}=\exp[-[\lambda_{14}^{(2)}(1)]^{(17)}t],$$

$$[s_{14}^{(2)}(t,2)]^{(17)}=\exp[-[\lambda_{14}^{(2)}(2)]^{(17)}t],$$

$$[s_{14}^{(2)}(t,3)]^{(17)}=\exp[-[\lambda_{14}^{(2)}(3)]^{(17)}t],$$

$$[s_{14}^{(2)}(t,4)]^{(17)}=\exp[-[\lambda_{14}^{(2)}(4)]^{(17)}t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$$[\lambda_{14}^{(2)}(1)]^{(17)},\ [\lambda_{14}^{(2)}(2)]^{(17)},\ [\lambda_{14}^{(2)}(3)]^{(17)},[\lambda_{14}^{(2)}(4)]^{(17)},$$

for component $E_{21}^{(2)}$

$$[s_{21}^{(2)}(t,\cdot)]^{(17)}=[1,[s_{21}^{(2)}(t,1)]^{(17)},[s_{21}^{(2)}(t,2)]^{(17)},$$
$$[s_{21}^{(2)}(t,3)]^{(17)},[s_{21}^{(2)}(t,4)]^{(17)}]$$

coordinates

$$[s_{21}^{(2)}(t,1)]^{(17)}=\exp[-[\lambda_{21}^{(2)}(1)]^{(17)}t],$$

$$[s_{21}^{(2)}(t,2)]^{(17)}=\exp[-[\lambda_{21}^{(2)}(2)]^{(17)}t],$$

$$[s_{21}^{(2)}(t,3)]^{(17)}=\exp[-[\lambda_{21}^{(2)}(3)]^{(17)}t],$$

$$[s_{21}^{(2)}(t,4)]^{(17)}=\exp[-[\lambda_{21}^{(2)}(4)]^{(17)}t],$$

or the intensities of departure from the safety states subsets $\{1,2,3,4\}$, $\{2,3,4\}$, $\{3,4\}$, $\{4\}$, respectively

$$[\lambda_{21}^{(2)}(1)]^{(17)},\ [\lambda_{21}^{(2)}(2)]^{(17)},\ [\lambda_{21}^{(2)}(3)]^{(17)},[\lambda_{21}^{(2)}(4)]^{(17)},$$

for component $E_{22}^{(2)}$

$$[s_{22}^{(2)}(t,\cdot)]^{(17)}=[1,[s_{22}^{(2)}(t,1)]^{(17)},[s_{22}^{(2)}(t,2)]^{(17)},$$
$$[s_{22}^{(2)}(t,3)]^{(17)},[s_{22}^{(2)}(t,4)]^{(17)}]$$

coordinates

$$[s_{22}^{(2)}(t,1)]^{(17)}=\exp[-[\lambda_{22}^{(2)}(1)]^{(17)}t],$$

$$[s_{22}^{(2)}(t,2)]^{(17)}=\exp[-[\lambda_{22}^{(2)}(2)]^{(17)}t],$$

$$[s_{22}^{(2)}(t,3)]^{(17)}=\exp[-[\lambda_{22}^{(2)}(3)]^{(17)}t],$$

$$[s_{22}^{(2)}(t,4)]^{(17)}=\exp[-[\lambda_{22}^{(2)}(4)]^{(17)}t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{22}^{(2)}(1)]^{(17)},\ [\lambda_{22}^{(2)}(2)]^{(17)},\ [\lambda_{22}^{(2)}(3)]^{(17)}, [\lambda_{22}^{(2)}(4)]^{(17)},$$

for component $E_{31}^{(2)}$

$$[s_{31}^{(2)}(t,\cdot)]^{(17)} = [1, [s_{31}^{(2)}(t,1)]^{(17)}, [s_{31}^{(2)}(t,2)]^{(17)}, [s_{31}^{(2)}(t,3)]^{(17)}, [s_{31}^{(2)}(t,4)]^{(17)}]$$

coordinates

$$[s_{31}^{(2)}(t,1)]^{(17)} = \exp[-[\lambda_{31}^{(2)}(1)]^{(17)} t],$$

$$[s_{31}^{(2)}(t,2)]^{(17)} = \exp[-[\lambda_{31}^{(2)}(2)]^{(17)} t],$$

$$[s_{31}^{(2)}(t,3)]^{(17)} = \exp[-[\lambda_{31}^{(2)}(3)]^{(17)} t],$$

$$[s_{31}^{(2)}(t,4)]^{(17)} = \exp[-[\lambda_{31}^{(2)}(4)]^{(17)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{31}^{(2)}(1)]^{(17)},\ [\lambda_{31}^{(2)}(2)]^{(17)},\ [\lambda_{31}^{(2)}(3)]^{(17)}, [\lambda_{31}^{(2)}(4)]^{(17)},$$

for component $E_{41}^{(2)}$

$$[s_{41}^{(2)}(t,\cdot)]^{(17)} = [1, [s_{41}^{(2)}(t,1)]^{(17)}, [s_{41}^{(2)}(t,2)]^{(17)}, [s_{41}^{(2)}(t,3)]^{(17)}, [s_{41}^{(2)}(t,4)]^{(17)}]$$

coordinates

$$[s_{41}^{(2)}(t,1)]^{(17)} = \exp[-[\lambda_{41}^{(2)}(1)]^{(17)} t],$$

$$[s_{41}^{(2)}(t,2)]^{(17)} = \exp[-[\lambda_{41}^{(2)}(2)]^{(17)} t],$$

$$[s_{41}^{(2)}(t,3)]^{(17)} = \exp[-[\lambda_{41}^{(2)}(3)]^{(17)} t],$$

$$[s_{41}^{(2)}(t,4)]^{(17)} = \exp[-[\lambda_{41}^{(2)}(4)]^{(17)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{41}^{(2)}(1)]^{(17)},\ [\lambda_{41}^{(2)}(2)]^{(17)},\ [\lambda_{41}^{(2)}(3)]^{(17)}, [\lambda_{41}^{(2)}(4)]^{(17)},$$

for component $E_{51}^{(2)}$

$$[s_{51}^{(2)}(t,\cdot)]^{(17)} = [1, [s_{51}^{(2)}(t,1)]^{(17)}, [s_{51}^{(2)}(t,2)]^{(17)}, [s_{51}^{(2)}(t,3)]^{(17)}, [s_{51}^{(2)}(t,4)]^{(17)}]$$

coordinates

$$[s_{51}^{(2)}(t,1)]^{(17)} = \exp[-[\lambda_{51}^{(2)}(1)]^{(17)} t],$$

$$[s_{41}^{(2)}(t,2)]^{(17)} = \exp[-[\lambda_{41}^{(2)}(2)]^{(17)} t],$$

$$[s_{51}^{(2)}(t,3)]^{(17)} = \exp[-[\lambda_{51}^{(2)}(3)]^{(17)} t],$$

$$[s_{51}^{(2)}(t,4)]^{(17)} = \exp[-[\lambda_{51}^{(2)}(4)]^{(17)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{51}^{(2)}(1)]^{(17)},\ [\lambda_{51}^{(2)}(2)]^{(17)},\ [\lambda_{51}^{(2)}(3)]^{(17)}, [\lambda_{51}^{(6)}(4)]^{(17)},$$

for component $E_{61}^{(2)}$

$$[s_{61}^{(2)}(t,\cdot)]^{(17)} = [1, [s_{61}^{(2)}(t,1)]^{(17)}, [s_{61}^{(2)}(t,2)]^{(17)}, [s_{61}^{(2)}(t,3)]^{(17)}, [s_{61}^{(2)}(t,4)]^{(17)}],$$

coordinates

$$[s_{61}^{(2)}(t,1)]^{(17)} = \exp[-[\lambda_{61}^{(2)}(1)]^{(17)} t],$$

$$[s_{61}^{(2)}(t,2)]^{(17)} = \exp[-[\lambda_{61}^{(2)}(2)]^{(17)} t],$$

$$[s_{61}^{(2)}(t,3)]^{(17)} = \exp[-[\lambda_{61}^{(2)}(3)]^{(17)} t],$$

$$[s_{61}^{(2)}(t,4)]^{(17)} = \exp[-[\lambda_{61}^{(2)}(4)]^{(17)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{61}^{(2)}(1)]^{(17)},\ [\lambda_{61}^{(2)}(2)]^{(17)},\ [\lambda_{61}^{(2)}(3)]^{(17)}, [\lambda_{61}^{(2)}(4)]^{(17)},$$

for component $E_{71}^{(2)}$

$$[s_{71}^{(2)}(t,\cdot)]^{(17)} = [1, [s_{71}^{(2)}(t,1)]^{(17)}, [s_{71}^{(2)}(t,2)]^{(17)}, [s_{71}^{(2)}(t,3)]^{(17)}, [s_{71}^{(2)}(t,4)]^{(17)}]$$

coordinates

$$[s_{71}^{(2)}(t,1)]^{(17)} = \exp[-[\lambda_{71}^{(2)}(1)]^{(17)} t],$$

$$[s_{71}^{(2)}(t,2)]^{(17)} = \exp[-[\lambda_{71}^{(2)}(2)]^{(17)} t],$$

$$[s_{71}^{(2)}(t,3)]^{(17)} = \exp[-[\lambda_{71}^{(2)}(3)]^{(17)} t],$$

$$[s_{71}^{(2)}(t,4)]^{(17)} = \exp[-[\lambda_{71}^{(2)}(4)]^{(17)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{71}^{(2)}(1)]^{(17)},\ [\lambda_{71}^{(2)}(2)]^{(17)},\ [\lambda_{71}^{(2)}(3)]^{(17)}, [\lambda_{71}^{(2)}(4)]^{(17)},$$

- the reliability functions of the subsystem S_5 components

for component $E_{11}^{(5)}$

$$[s_{11}^{(5)}(t,\cdot)]^{(17)} = [1, [s_{11}^{(5)}(t,1)]^{(17)}, [s_{11}^{(5)}(t,2)]^{(17)}, [s_{11}^{(5)}(t,3)]^{(17)}, [s_{11}^{(5)}(t,4)]^{(17)}]$$

coordinates

$$[s_{11}^{(5)}(t,1)]^{(17)} = \exp[-[\lambda_{11}^{(5)}(1)]^{(17)} t],$$

$$[s_{11}^{(5)}(t,2)]^{(17)} = \exp[-[\lambda_{11}^{(5)}(2)]^{(17)} t],$$

$$[s_{11}^{(5)}(t,3)]^{(17)} = \exp[-[\lambda_{11}^{(5)}(3)]^{(17)} t],$$

$$[s_{11}^{(5)}(t,4)]^{(17)} = \exp[-[\lambda_{11}^{(5)}(4)]^{(17)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{11}^{(5)}(1)]^{(17)},\ [\lambda_{11}^{(5)}(2)]^{(17)},\ [\lambda_{11}^{(5)}(3)]^{(17)}, [\lambda_{11}^{(5)}(4)]^{(17)},$$

for component $E_{21}^{(5)}$

$$[s_{21}^{(5)}(t,\cdot)]^{(17)} = [1, [s_{21}^{(5)}(t,1)]^{(17)}, [s_{21}^{(5)}(t,2)]^{(17)}, [s_{21}^{(5)}(t,3)]^{(17)}, [s_{21}^{(5)}(t,4)]^{(17)}]$$

coordinates

$$[s_{21}^{(5)}(t,1)]^{(17)} = \exp[-[\lambda_{21}^{(5)}(1)]^{(17)} t],$$

$$[s_{21}^{(5)}(t,2)]^{(17)} = \exp[-[\lambda_{21}^{(5)}(2)]^{(17)} t],$$

$$[s_{21}^{(5)}(t,3)]^{(17)} = \exp[-[\lambda_{21}^{(5)}(3)]^{(17)} t],$$

$$[s_{21}^{(5)}(t,4)]^{(17)} = \exp[-[\lambda_{21}^{(5)}(4)]^{(17)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{21}^{(5)}(1)]^{(17)},\ [\lambda_{21}^{(5)}(2)]^{(17)},\ [\lambda_{21}^{(5)}(3)]^{(17)}, [\lambda_{21}^{(5)}(4)]^{(17)},$$

for component $E_{31}^{(5)}$

$$[s_{31}^{(5)}(t,\cdot)]^{(17)} = [1, [s_{31}^{(5)}(t,1)]^{(17)}, [s_{31}^{(5)}(t,2)]^{(17)}, [s_{31}^{(5)}(t,3)]^{(17)}, [s_{31}^{(5)}(t,4)]^{(17)}]$$

coordinates

$$[s_{31}^{(5)}(t,1)]^{(17)} = \exp[-[\lambda_{31}^{(5)}(1)]^{(17)} t],$$

$$[s_{31}^{(5)}(t,2)]^{(17)} = \exp[-[\lambda_{31}^{(5)}(2)]^{(17)} t],$$

$$[s_{31}^{(5)}(t,3)]^{(17)} = \exp[-[\lambda_{31}^{(5)}(3)]^{(17)} t],$$

$$[s_{31}^{(5)}(t,4)]^{(17)} = \exp[-[\lambda_{31}^{(5)}(4)]^{(17)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{31}^{(5)}(1)]^{(17)},\ [\lambda_{31}^{(5)}(2)]^{(17)},\ [\lambda_{31}^{(5)}(3)]^{(17)}, [\lambda_{31}^{(5)}(4)]^{(17)},$$

xviii) at the system operation states z_{18}:

- the reliability functions of the subsystem S_3 components

for component $E_{11}^{(3)}$

$$[s_{11}^{(3)}(t,\cdot)]^{(18)} = [1, [s_{11}^{(3)}(t,1)]^{(18)}, [s_{11}^{(3)}(t,2)]^{(18)}, [s_{11}^{(3)}(t,3)]^{(18)}, [s_{11}^{(3)}(t,4)]^{(18)}]$$

coordinates

$$[s_{11}^{(3)}(t,1)]^{(18)} = \exp[-[\lambda_{11}^{(3)}(1)]^{(18)} t],$$

$$[s_{11}^{(3)}(t,2)]^{(18)} = \exp[-[\lambda_{11}^{(3)}(2)]^{(18)} t],$$

$$[s_{11}^{(3)}(t,3)]^{(18)} = \exp[-[\lambda_{11}^{(3)}(3)]^{(18)} t],$$

$$[s_{11}^{(3)}(t,4)]^{(18)} = \exp[-[\lambda_{11}^{(3)}(4)]^{(18)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{11}^{(3)}(1)]^{(18)},\ [\lambda_{11}^{(3)}(2)]^{(18)},\ [\lambda_{11}^{(3)}(3)]^{(18)}, [\lambda_{11}^{(3)}(4)]^{(18)},$$

for component $E_{21}^{(3)}$

$$[s_{21}^{(3)}(t,\cdot)]^{(18)} = [1, [s_{21}^{(3)}(t,1)]^{(18)}, [s_{21}^{(3)}(t,2)]^{(18)}, [s_{21}^{(3)}(t,3)]^{(18)}, [s_{21}^{(3)}(t,4)]^{(18)}]$$

coordinates

$$[s_{21}^{(3)}(t,1)]^{(18)} = \exp[-[\lambda_{21}^{(3)}(1)]^{(18)} t],$$

$$[s_{21}^{(3)}(t,2)]^{(18)} = \exp[-[\lambda_{21}^{(3)}(2)]^{(18)} t],$$

$$[s_{21}^{(3)}(t,3)]^{(18)} = \exp[-[\lambda_{21}^{(3)}(3)]^{(18)} t],$$

$$[s_{21}^{(3)}(t,4)]^{(18)} = \exp[-[\lambda_{21}^{(3)}(4)]^{(18)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{21}^{(3)}(1)]^{(18)},\ [\lambda_{21}^{(3)}(2)]^{(18)},\ [\lambda_{21}^{(3)}(3)]^{(18)}, [\lambda_{21}^{(3)}(4)]^{(18)},$$

for component $E_{31}^{(3)}$

$$[s_{31}^{(3)}(t,\cdot)]^{(18)} = [1, [s_{31}^{(3)}(t,1)]^{(18)}, [s_{31}^{(3)}(t,2)]^{(18)}, [s_{31}^{(3)}(t,3)]^{(18)}, [s_{31}^{(3)}(t,4)]^{(18)}]$$

coordinates

$$[s_{31}^{(3)}(t,1)]^{(18)} = \exp[-[\lambda_{31}^{(3)}(1)]^{(18)} t],$$

$$[s_{31}^{(3)}(t,2)]^{(18)} = \exp[-[\lambda_{31}^{(3)}(2)]^{(18)} t],$$

$$[s_{31}^{(3)}(t,3)]^{(18)} = \exp[-[\lambda_{31}^{(3)}(3)]^{(18)} t],$$

$$[s_{31}^{(3)}(t,4)]^{(18)} = \exp[-[\lambda_{31}^{(3)}(4)]^{(18)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{31}^{(3)}(1)]^{(18)},\ [\lambda_{31}^{(3)}(2)]^{(18)},\ [\lambda_{31}^{(3)}(3)]^{(18)}, [\lambda_{31}^{(3)}(4)]^{(18)},$$

- the reliability functions of the subsystem S_4 components

for component $E_{11}^{(4)}$

$$[s_{11}^{(4)}(t,\cdot)]^{(18)} = [1, [s_{11}^{(4)}(t,1)]^{(18)}, [s_{11}^{(4)}(t,2)]^{(18)}, [s_{11}^{(4)}(t,3)]^{(18)}, [s_{11}^{(4)}(t,4)]^{(18)}]$$

coordinates

$$[s_{11}^{(4)}(t,1)]^{(18)} = \exp[-[\lambda_{11}^{(4)}(1)]^{(18)} t],$$

$$[s_{11}^{(4)}(t,2)]^{(18)} = \exp[-[\lambda_{11}^{(4)}(2)]^{(18)} t],$$

$$[s_{11}^{(4)}(t,3)]^{(18)} = \exp[-[\lambda_{11}^{(4)}(3)]^{(18)} t],$$

$$[s_{11}^{(4)}(t,4)]^{(18)} = \exp[-[\lambda_{11}^{(4)}(4)]^{(18)} t],$$

or the intensities of departure from the safety states subsets {1,2,3,4}, {2,3,4}, {3,4}, {4}, respectively

$$[\lambda_{11}^{(4)}(1)]^{(18)},\ [\lambda_{11}^{(4)}(2)]^{(18)},\ [\lambda_{11}^{(4)}(3)]^{(18)}, [\lambda_{11}^{(4)}(4)]^{(18)}.$$

5.1.3. The Stena Baltica ferry technical system components safety data collection

5.1.3.1. Data coming from experts

In the *Tables 1-5* there are given the approximate realizations

$$[\hat{\mu}_{ij}^{(k)}(u)]^{(b)},\ k = 1,2,3,4,5,\ u = 1,2,3,4,\ b = 1,2,...,18,$$

of the mean values

$$[\mu_{ij}^{(k)}(u)]^{(b)} = E[[T_{ij}^{(k)}(u)]^{(b)}],\ k = 1,2,3,4,5,\ u = 1,2,3,4,\ b = 1,2,...,18,$$

of the conditional lifetimes $[T_{ij}^{(k)}(u)]^{(b)}$, $k = 1,2,3,4,5$ $u = 1,2,3,4$, $b = 1,2,...,18$, in safety states of the component $E_{ij}^{(k)}$ of the Stena Baltica ferry subsystems S_k, $k = 1,2,3,4,5$ in particular operation states z_b, $b = 1,2,...,18$ estimated on the basis of the expert opinions.

Table 1. The approximate mean values $[\hat{\mu}_{ij}^{(1)}(u)]^{(b)}$ of the subsystem S_1 components conditional lifetimes $[T_{ij}^{(1)}(u)]^{(b)}$ in particular operation states z_b

Subsyste m S_1 componet		E_{11}										
Operation state z_b	Safety state subsets $\{u,u+1,...,4\}$	The approximate mean values $[\hat{\mu}_{ij}^{(1)}(u)]^{(b)}$ of the conditional lifetimes $[T_{ij}^{(1)}(u)]^{(b)}$ of the component $E_{ij}^{(1)}$ (*in years*)										
z_1												
z_2	u = 1	30										
	u = 2	25										
	u = 3	22										
	u = 4	20										
z_3	u = 1	30										
	u = 2	25										
	u = 3	22										
	u = 4	20										
z_4	u = 1	30										
	u = 2	25										
	u = 3	22										
	u = 4	20										
z_5	u = 1	30										
	u = 2	25										
	u = 3	22										
	u = 4	20										
z_6	u = 1	30										
	u = 2	25										
	u = 3	22										
	u = 4	20										
z_7	u = 1	30										
	u = 2	25										
	u = 3	22										
	u = 4	20										
z_8												
z_9												
z_{10}	u = 1	30										
	u = 2	25										
	u = 3	22										
	u = 4	20										
z_{11}	u = 1	30										
	u = 2	25										
	u = 3	22										
	u = 4	20										
z_{12}	u = 1	30										
	u = 2	25										
	u = 3	22										
	u = 4	20										
z_{13}	u = 1	30										
	u = 2	25										
	u = 3	22										

	$u = 4$	20										
z_{14}	$u = 1$	30										
	$u = 2$	25										
	$u = 3$	22										
	$u = 4$	20										
z_{15}	$u = 1$	30										
	$u = 2$	25										
	$u = 3$	22										
	$u = 4$	20										
z_{16}	$u = 1$	30										
	$u = 2$	25										
	$u = 3$	22										
	$u = 4$	20										
z_{17}	$u = 1$	30										
	$u = 2$	25										
	$u = 3$	22										
	$u = 4$	20										
z_{18}												

Table 2. The approximate mean values $[\hat{\mu}_{ij}^{(2)}(u)]^{(b)}$ of the subsystem S_2 components conditional lifetimes $[T_{ij}^{(2)}(u)]^{(b)}$ in particular operation states z_b

Subsystem S_2 components		E_{11}	E_{12}	E_{13}	E_{14}	E_{21}	E_{22}	E_{31}	E_{41}	E_{51}	E_{61}	E_{71}
Operation state z_b	Safety state subsets $\{u, u+1, ..., 4\}$	The approximate mean values $[\hat{\mu}_{ij}^{(2)}(u)]^{(b)}$ of the conditional lifetimes $[T_{ij}^{(2)}(u)]^{(b)}$ of the component $E_{ij}^{(2)}$ (*in years*)										
z_1												
z_2	$u = 1$	30	30	30	30	15	15	15	30	30	30	30
	$u = 2$	25	25	25	25	14	14	14	25	25	25	25
	$u = 3$	20	20	20	20	13	13	13	22	22	22	22
	$u = 4$	18	18	18	18	12	12	12	20	20	20	20
z_3	$u = 1$	30	30	30	30	30	30	30	30	30	30	30
	$u = 2$	25	25	25	25	25	25	25	25	25	25	25
	$u = 3$	20	20	20	20	22	22	22	22	22	22	22
	$u = 4$	18	18	18	18	20	20	20	20	20	20	20
z_4	$u = 1$	30	30	30	30	-	-	-	30	30	30	30
	$u = 2$	25	25	25	25				25	25	25	25
	$u = 3$	20	20	20	20				22	22	22	22
	$u = 4$	18	18	18	18				20	20	20	20
z_5	$u = 1$	30	30	30	30	-	-	-	30	30	30	30
	$u = 2$	25	25	25	25				25	25	25	25
	$u = 3$	20	20	20	20				22	22	22	22
	$u = 4$	18	18	18	18				20	20	20	20
z_6	$u = 1$	30	30	30	30	30	30	30	30	30	30	30
	$u = 2$	25	25	25	25	25	25	25	25	25	25	25

	$u = 3$	20	20	20	20	22	22	22	22	22	22	22
	$u = 4$	18	18	18	18	20	20	20	20	20	20	20
z_7	$u = 1$	30	30	30	30	15	15	15	30	30	30	30
	$u = 2$	25	25	25	25	14	14	14	25	25	25	25
	$u = 3$	20	20	20	20	13	13	13	22	22	22	22
	$u = 4$	18	18	18	18	12	12	12	20	20	20	20
z_8												
z_9												
z_{10}	$u = 1$	30	30	30	30	15	15	15	30	30	30	30
	$u = 2$	25	25	25	25	14	14	14	25	25	25	25
	$u = 3$	20	20	20	20	13	13	13	22	22	22	22
	$u = 4$	18	18	18	18	12	12	12	20	20	20	20
z_{11}	$u = 1$	30	30	30	30	15	15	15	30	30	30	30
	$u = 2$	25	25	25	25	14	14	14	25	25	25	25
	$u = 3$	20	20	20	20	13	13	13	22	22	22	22
	$u = 4$	18	18	18	18	12	12	12	20	20	20	20
z_{12}	$u = 1$	30	30	30	30	-	-	-	30	30	30	30
	$u = 2$	25	25	25	25				25	25	25	25
	$u = 3$	20	20	20	20				22	22	22	22
	$u = 4$	18	18	18	18				20	20	20	20
z_{13}	$u = 1$	30	30	30	30	-	-	-	30	30	30	30
	$u = 2$	25	25	25	25				25	25	25	25
	$u = 3$	20	20	20	20				22	22	22	22
	$u = 4$	18	18	18	18				20	20	20	20
z_{14}	$u = 1$	30	30	30	30	-	-	-	30	30	30	30
	$u = 2$	25	25	25	25				25	25	25	25
	$u = 3$	20	20	20	20				22	22	22	22
	$u = 4$	18	18	18	18				20	20	20	20
z_{15}	$u = 1$	30	30	30	30	30	30	30	30	30	30	30
	$u = 2$	25	25	25	25	25	25	25	25	25	25	25
	$u = 3$	20	20	20	20	22	22	22	22	22	22	22
	$u = 4$	18	18	18	18	20	20	20	20	20	20	20
z_{16}	$u = 1$	30	30	30	30	15	15	15	30	30	30	30
	$u = 2$	25	25	25	25	14	14	14	25	25	25	25
	$u = 3$	20	20	20	20	13	13	13	22	22	22	22
	$u = 4$	18	18	18	18	12	12	12	20	20	20	20
z_{17}	$u = 1$	30	30	30	30	15	15	15	30	30	30	30
	$u = 2$	25	25	25	25	14	14	14	25	25	25	25
	$u = 3$	20	20	20	20	13	13	13	22	22	22	22
	$u = 4$	18	18	18	18	12	12	12	20	20	20	20
z_{18}												

Table 3. The approximate mean values $[\hat{\mu}_{ij}^{(3)}(u)]^{(b)}$ of the subsystem S_3 components conditional lifetimes $[T_{ij}^{(3)}(u)]^{(b)}$ in particular operation states z_b

Subsystem S_3 componet		E_{11}	E_{21}	E_{31}	E_{41}	E_{51}						
Operation state z_b	Safety state subsets $\{u,u+1,...,4\}$	The approximate mean values $[\hat{\mu}_{ij}^{(3)}(u)]^{(b)}$ of the conditional lifetimes $[T_{ij}^{(3)}(u)]^{(b)}$ of the component $E_{ij}^{(3)}$ (*in years*)										
z_1	u = 1	5	5	30	-	-						
	u = 2	3	4	25								
	u = 3	2.8	3	22								
	u = 4	2.5	2.5	20								
z_1												
z_2												
z_3												
z_4												
z_5												
z_6												
z_7												
z_8	u = 1	5	30	-	-	-						
	u = 2	3	25									
	u = 3	2.8	22									
	u = 4	2.5	20									
z_9	u = 1	5	30	-	-	-						
	u = 2	3	25									
	u = 3	2.8	22									
	u = 4	2.5	20									
z_{10}												
z_{11}												
z_{12}												
z_{13}												
z_{14}												
z_{15}												
z_{16}												
z_{17}												
z_{18}	u = 1	5	5	30	-	-						
	u = 2	3	4	25								
	u = 3	2.8	3	22								
	u = 4	2.5	2.5	20								

Table 4. The approximate mean values $[\hat{\mu}_{ij}^{(4)}(u)]^{(b)}$ of the subsystem S_4 components conditional lifetimes $[T_{ij}^{(4)}(u)]^{(b)}$ in particular operation states z_b

Subsystem S_4 componet		E_{11}	E_{21}									
Operation state z_b	Safety state subsets $\{u,u+1,...,4\}$	The approximate mean values $[\hat{\mu}_{ij}^{(4)}(u)]^{(b)}$ of the conditional lifetimes $[T_{ij}^{(4)}(u)]^{(b)}$ of the component $E_{ij}^{(4)}$ (*in years*)										
z_1	$u = 1$	20	-									
	$u = 2$	16										
	$u = 3$	15										
	$u = 4$	14										
z_2												
z_3												
z_4	$u = 1$	20	-									
	$u = 2$	18										
	$u = 3$	16										
	$u = 4$	15										
z_5	$u = 1$	20	-									
	$u = 2$	18										
	$u = 3$	16										
	$u = 4$	15										
z_6	$u = 1$	20	-									
	$u = 2$	18										
	$u = 3$	16										
	$u = 4$	15										
z_7												
z_8	$u = 1$	20	-									
	$u = 2$	16										
	$u = 3$	15										
	$u = 4$	14										
z_9	$u = 1$	20	-									
	$u = 2$	16										
	$u = 3$	15										
	$u = 4$	14										
z_{10}												
z_{11}												
z_{12}	$u = 1$	20	-									
	$u = 2$	18										
	$u = 3$	16										
	$u = 4$	15										
z_{13}	$u = 1$	20	-									
	$u = 2$	18										
	$u = 3$	16										
	$u = 4$	15										
z_{14}	$u = 1$	20	-									
	$u = 2$	18										
	$u = 3$	16										

	$u = 4$	15										
z_{15}												
z_{16}												
z_{17}												
z_{18}	$u = 1$	20	-									
	$u = 2$	16										
	$u = 3$	15										
	$u = 4$	14										

Table 5. The approximate mean values $[\hat{\mu}_{ij}^{(5)}(u)]^{(b)}$ of the subsystem S_5 components conditional lifetimes $[T_{ij}^{(5)}(u)]^{(b)}$ in particular operation states z_b

Subsystem S_5 componet		E_{11}	E_{21}	E_{31}								
Operation state z_b	Safety state subsets $\{u, u+1, ..., 4\}$	The approximate mean values $[\hat{\mu}_{ij}^{(5)}(u)]^{(b)}$ of the conditional lifetimes $[T_{ij}^{(5)}(u)]^{(b)}$ of the component $E_{ij}^{(5)}$ (*in years*)										
z_1												
z_2	$u = 1$	30	30	30								
	$u = 2$	25	25	25								
	$u = 3$	22	20	20								
	$u = 4$	20	18	16								
z_3												
z_4												
z_5												
z_6												
z_7	$u = 1$	30	30	30								
	$u = 2$	25	25	25								
	$u = 3$	22	20	20								
	$u = 4$	20	18	16								
z_8												
z_9												
z_{10}	$u = 1$	30	30	30								
	$u = 2$	25	25	25								
	$u = 3$	22	20	20								
	$u = 4$	20	18	16								
z_{11}												
z_{12}												
z_{13}												
z_{14}												
z_{15}												
z_{16}												
z_{17}	$u = 1$	30	30	30								
	$u = 2$	25	25	25								

	$u = 3$	22	20	20								
	$u = 4$	20	18	16								
z_{18}												

5.1.3.2. Data coming from components safety states changing processes

There are no data collected from the Stena Baltica ferry technical system components safety states changing processes.

5.1.4. Statistical identification of the Stena Baltica ferry technical system components safety

5.1.4.1. Statistical identification of the Stena Baltica ferry technical system components safety on the basis of data coming from experts

To identify the parameters of multistate safety functions of Stena Baltica ferry technical system components the statistical data coming from their failure processes are needed. The statistical data that has been collected is given in *Tables 1-5*.
From data given in *Tables 1–5*, on the basis of the resulting from (8) formula

$$[\hat{\lambda}_{ij}^{(k)}(u)]^{(b)} = \frac{1}{[\hat{\mu}_{ij}^{(k)}(u)]^{(b)}},\ k = 1,2,3,4,5,$$

$$u = 1,2,3,4,\ b = 1,2,...,18,$$

we get the approximate values $[\hat{\lambda}_{ij}^{(k)}(u)]^{(b)}$ of the subsystems S_k, $b = 1,2,3,4,5,$ components unknown intensities $[\lambda_{ij}^{(k)}(u)]^{(b)}$ of departure from the safety states subset $\{1,2,3,4\}, \{2,3,4\}, \{3,4\}, \{4\}$, while the system is operating in the operation state z_b, $b = 1,2,...,18.$ The results are presented below.
At the operation states z_1, i.e. at the cargo loading and un-loading state the ferry is built of $n_1 = 2$ subsystems S_3 and S_4 forming a series structure shown in *Figure 13*.
The subsystem S_3 consist of components $E_{11}^{(3)}$, $E_{21}^{(3)}$, $E_{31}^{(3)}$ with the intensities of departure from the safety states subsets $\{1,2,3,4\}, \{2,3,4\}, \{3,4\}, \{4\}$, respectively

$[\lambda_{11}^{(3)}(1)]^{(1)} = 0.2,\ [\lambda_{11}^{(3)}(2)]^{(1)} = 0.3,$

$[\lambda_{11}^{(3)}(3)]^{(1)} = 0.35,\ [\lambda_{11}^{(3)}(4)]^{(1)} = 0.4,$

$[\lambda_{21}^{(3)}(1)]^{(1)} = 0.2,\ [\lambda_{21}^{(3)}(2)]^{(1)} = 0.25,$

$[\lambda_{21}^{(3)}(3)]^{(1)} = 0.3,\ [\lambda_{21}^{(3)}(4)]^{(1)} = 0.4,$

$[\lambda_{31}^{(3)}(1)]^{(1)} = 0.033,\ [\lambda_{31}^{(3)}(2)]^{(1)} = 0.04,$

$[\lambda_{31}^{(3)}(3)]^{(1)} = 0.045,\ [\lambda_{31}^{(3)}(4)]^{(1)} = 0.05.$

The subsystem S_4 consist of component $E_{11}^{(4)}$, with the intensities of departure from the safety states subsets $\{1,2,3,4\}, \{2,3,4\}, \{3,4\}, \{4\}$, respectively

$[\lambda_{11}^{(4)}(1)]^{(1)} = 0.05,\ [\lambda_{11}^{(4)}(2)]^{(1)} = 0.06,$

$[\lambda_{11}^{(4)}(3)]^{(1)} = 0.065,\ [\lambda_{11}^{(4)}(4)]^{(1)} = 0.07.$

At the operation states z_2, i.e. at the unmooring operations state the ferry is built of $n_2 = 3$ subsystems S_1, S_2 and S_5 forming a series structure shown in *Figure 14*.
The subsystem S_1 consist of component $E_{11}^{(1)}$, with the intensities of departure from the safety states subsets $\{1,2,3,4\}, \{2,3,4\}, \{3,4\}, \{4\}$, respectively

$[\lambda_{11}^{(1)}(1)]^{(2)} = 0.033,\ [\lambda_{11}^{(1)}(2)]^{(2)} = 0.04,$

$[\lambda_{11}^{(1)}(3)]^{(2)} = 0.045,\ [\lambda_{11}^{(1)}(4)]^{(2)} = 0.05.$

The subsystem S_2 consist of components $E_{11}^{(2)}$, $E_{12}^{(2)}$, $E_{13}^{(2)}$, $E_{14}^{(2)}$, $E_{21}^{(2)}$, $E_{22}^{(2)}$, $E_{31}^{(2)}$, $E_{41}^{(2)}$, $E_{51}^{(2)}$, $E_{61}^{(2)}$, $E_{71}^{(2)}$, with the intensities of departure from the safety states subsets $\{1,2,3,4\}, \{2,3,4\}, \{3,4\}, \{4\}$, respectively

$[\lambda_{11}^{(2)}(1)]^{(2)} = 0.033,\ [\lambda_{11}^{(2)}(2)]^{(2)} = 0.04,$

$[\lambda_{11}^{(2)}(3)]^{(2)} = 0.05,\ [\lambda_{11}^{(2)}(4)]^{(2)} = 0.055,$

$[\lambda_{12}^{(2)}(1)]^{(2)} = 0.033,\ [\lambda_{12}^{(2)}(2)]^{(2)} = 0.04,$

$[\lambda_{12}^{(2)}(3)]^{(2)} = 0.05,\ [\lambda_{12}^{(2)}(4)]^{(2)} = 0.055,$

$[\lambda_{13}^{(2)}(1)]^{(2)} = 0.033,\ [\lambda_{13}^{(2)}(2)]^{(2)} = 0.04,$