



# ХАРАКТЕРНЫЕ ОСОБЕННОСТИ КОНЦЕПТУАЛЬНОЙ МОДЕЛИ БАЗЫ ДАННЫХ ПО ХАРАКТЕРИСТИКАМ НАДЁЖНОСТИ

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# ПРИЕМНИКИ И ПЕРЕДАТЧИКИ РАДИОСИГНАЛОВ



## МЕХАНИЧЕСКИЕ ЭЛЕМЕНТЫ ПРИМО- ПЕРЕДАЮЩИХ УСТРОЙСТВ



Электродвигатель привода антенны РЛС



# СПРАВОЧНИКИ ПО ХАРАКТЕРИСТИКАМ НАДЕЖНОСТИ ЭРИ И МЭ

## СПРАВОЧНИК

### Надёжность электрорадиоизделий

Справочник содержит сведения, предназначенные для использования при расчетах показателей надёжности радиоэлектронной аппаратуры военного назначения в соответствии с требованиями основополагающих нормативных документов комплексов Государственных военных стандартов «Мороз-6» и «Надёжность ВТ»



**NOT MEASUREMENT SENSITIVE**  
**MIL-HDBK-217F**  
**2 DECEMBER 1991**  
SUPERSEDING  
MIL-HDBK-217E, Notice 1  
2 January 1990

## MILITARY HANDBOOK

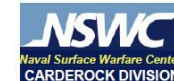
### RELIABILITY PREDICTION OF ELECTRONIC EQUIPMENT



AMSC N/A

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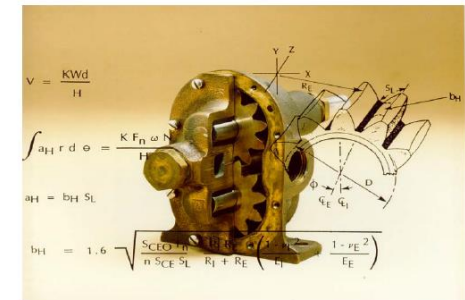
FSC-RELI



Naval Surface Warfare Center  
Carderock Division  
West Bethesda, Maryland 20817-5700



### Handbook of Reliability Prediction Procedures for Mechanical Equipment



Logistics Technology Support

CARDEROCKDIV, NSWC-11  
May 2011

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# СИСТЕМЫ РАСЧЕТА НАДЕЖНОСТИ ПРЕМО-ПЕРЕДАЮЩИХ УСТРОЙСТВ

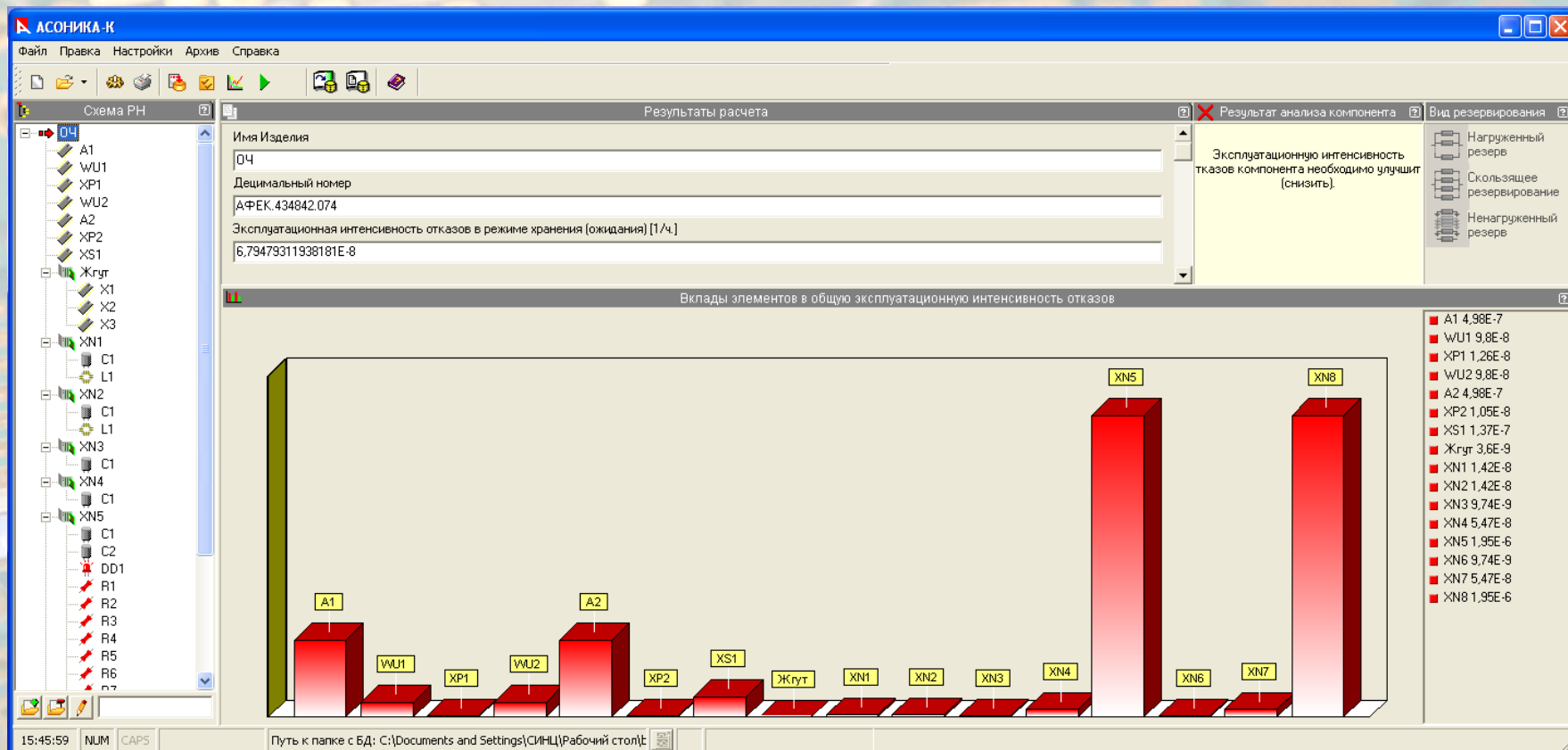
The image displays the MechRel software interface for reliability analysis. The main window shows a hierarchical tree of components for a 'Sample.mch' assembly, including parts like 'Static Seal A1', 'Poppet Valve A1', 'Dyn Seal A1', 'Solenoid A1', 'Subassembly2', 'Gear A1', 'Copy of Gear A1', 'Motor A!', 'Belt A3', 'Brake assembly', 'Brake A1', 'Spring D4', 'Dyn Seal F2', 'Accumulator Assembly', 'Accumulator A1', 'Poppet Valve A2', 'Static Seal A3', 'Static Seal B4', 'Static Seal A3', 'Static Seal B4', 'Diaphragm A1', and 'Actuator' with sub-components 'Actuator A1', 'Shaft A2', and 'Static Seal B3'.

Overlaid on the main window are several other windows:

- Static Seal**: A data entry form with fields for Part Number (A23921), Part Name (Static Seal), Manufacturer, Drawing No., Last Modified, Part Failure, Description, and Notes.
- Windchill 100**: A window for entering investigation details, showing a list of affected objects with columns for affected object, number, organization ID, and name.
- Find Object(s)**: A search window for finding objects within the system.
- SAM Commander for Windows**: A project management window showing a list of projects on Drive C, including 'Project TUTORIAL on Drive C'.
- Item Data**: A detailed configuration window for a specific item, showing fields for Item Name, Environment, Date Temp, Method of FR calculation, Failure Distribution, and various FR parameters.



# СИСТЕМА АСОНИКА-К-СЧ

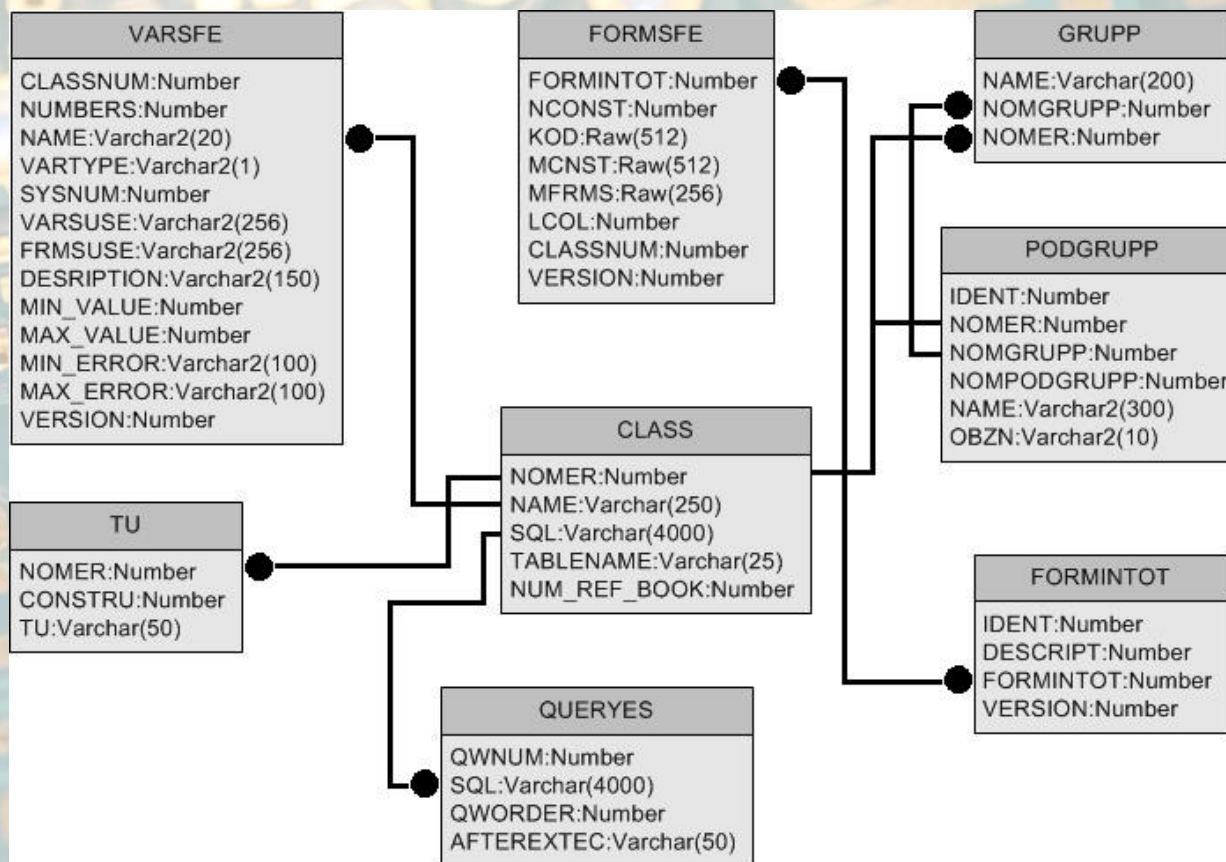




# СУБД ORACLE

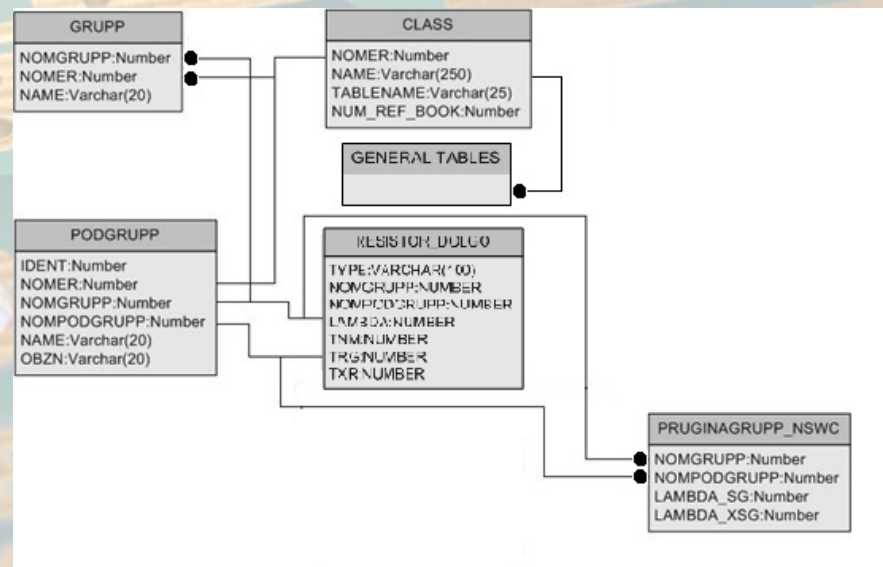
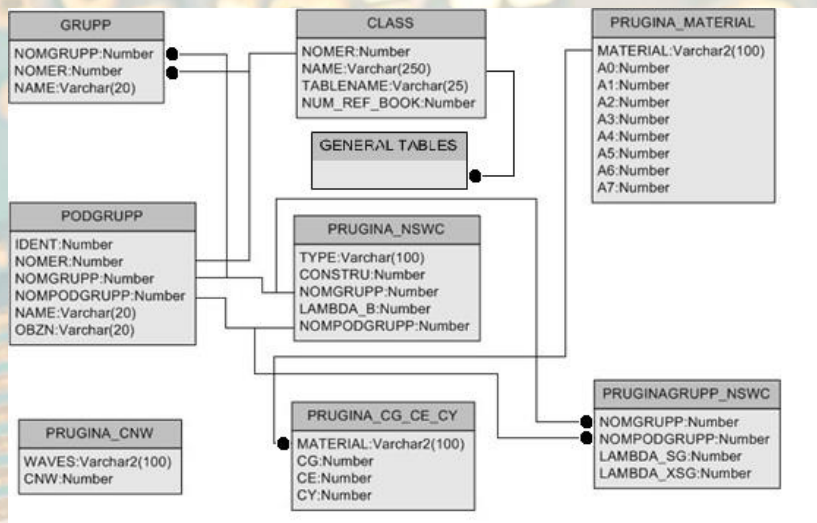


# СТРУКТУРА ГЛАВНЫХ ТАБЛИЦ БД СИСТЕМЫ АСОНИКА-К-СЧ





# СТРУКТУРА ТАБЛИЦ БЕЗОТКАЗНОСТИ МЭ И ДОЛГОВЕЧНОСТИ ЭРИ



# ПРИМЕРЫ ДАННЫХ

PL/SQL Developer - aasonika\_ch@ASKXP\_127.0.0.1 - [SQL Window - Edit data of table PRUGINAS@ASKXP\_127.0.0.1]

File Project Edit Session Debug Tools Macro Documents Reports Window Help

SQL Output Statistics

```
select t.*, t.rowid from pruginas t
```

|   | TYPE  | CONSTRU | NOMGRUPP | NOMPODGRUPP | LAMBDA_B | DC  | DW | L    | CY    | ROWID |
|---|-------|---------|----------|-------------|----------|-----|----|------|-------|-------|
| 1 | ДЮ-38 | ...     | 218      | 1           | 23.8E-06 | 30  | 3  | 33.7 | 4.657 |       |
| 2 | ДЮ-39 | ...     | 218      | 1           | 23.8E-06 | 40  | 4  | 45   | 4.657 |       |
| 3 | ДЮ-40 | ...     | 218      | 1           | 23.8E-06 | 50  | 5  | 52   | 4.657 |       |
| 4 | ДЮ-41 | ...     | 218      | 1           | 23.8E-06 | 54  | 6  | 54   | 4.657 |       |
| 5 | ДЮ-42 | ...     | 218      | 1           | 23.8E-06 | 72  | 8  | 72   | 4.657 |       |
| 6 | ДЮ-43 | ...     | 218      | 1           | 23.8E-06 | 80  | 10 | 70   | 4.657 |       |
| 7 | ДЮ-44 | ...     | 218      | 1           | 23.8E-06 | 96  | 12 | 83   | 4.657 |       |
| 8 | ДЮ-45 | ...     | 218      | 1           | 23.8E-06 | 120 | 15 | 106  | 4.657 |       |

SQL Window - Edit data of 1:1 8 records inserted

PL/SQL Developer - aasonika\_ch@ASKXP\_127.0.0.1 - [SQL Window - Edit data of table DOLGOV@ASKXP\_127.0.0.1]

File Project Edit Session Debug Tools Macro Documents Reports Window Help

SQL Output Statistics

```
select t.*, t.rowid from dolgov t
```

|  | TYPE   | NOMGRUPP | NOMPODGRUPP | LAMBDA | TNM       | TRG | TXP | ROWID |
|--|--------|----------|-------------|--------|-----------|-----|-----|-------|
|  | P1-1   | ...      | 1           | 1      | 0,048E-06 | 25  | 50  | 15    |
|  | P1-2   | ...      | 1           | 1      | 0,048E-06 | 30  | 60  | 25    |
|  | P1-3   | ...      | 1           | 1      | 0,048E-06 | 15  | 30  | 15    |
|  | P1-5   | ...      | 1           | 1      | 0,048E-06 | 15  | 30  | 15    |
|  | P1-8МП | ...      | 1           | 1      | 0,048E-06 | 20  | 40  | 15    |
|  | P1-9   | ...      | 1           | 1      | 0,048E-06 | 50  | 100 | 20    |
|  | P1-10  | ...      | 1           | 1      | 0,048E-06 | 20  | 30  | 15    |

SQL Window - Edit data of 1:1 0 rows selected in 0.08 seconds



**СПАСИБО  
ЗА  
ВНИМАНИЕ**