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INLAND TRANSPORT COMMITTEE

Working Group on Inland Water Transport

Working Party on the Standardization  
of Technical and Safety Requirements  
in Inland Navigation  
(nineteenth session, 14-16 March 2000,  
agenda item 4)

**HARMONIZATION OF THE REQUIREMENTS CONCERNING ANCHORS FOR  
INLAND NAVIGATION VESSELS**

Transmitted by the Governments of Lithuania, Romania and  
the Russian Federation

Note: At its seventeenth session, the Working Party agreed that it would be useful to collect information on actual anchor requirements for vessels other than self-propelled cargo vessels (covered by resolution No. 36, TRANS/SC.3/104/Add.3) and on the basis of this information and using also relevant CCNR and draft EC provisions to try to develop, with the help of a volunteer delegation, minimum pan-European anchor requirements for the following types of vessels: (i) passenger vessels; (ii) pushers; (iii) self-propelled pusher vessels; and (iv) pushed barges. Governments were invited to complete the tables set out in annex 2 to TRANS/SC.3/WP.3/35, reflecting the existing national requirements in their countries as far as the equipment of the above four types of inland navigation vessels was concerned (TRANS/SC.3/WP.3/35, paras. 13 and 14).

Reproduced below is the information received from Governments.

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LITHUANIA

**Table 1: Passenger vessels**

| Displacement | Dimensions      |                 |                 | Mean height of super-structure above waterline | Number, type and weight (calculated according to national requirements) of |                | Length of chain of bow/stern anchors | Additional observations:<br>Main region (zone) of operation of the vessel, etc. |
|--------------|-----------------|-----------------|-----------------|------------------------------------------------|----------------------------------------------------------------------------|----------------|--------------------------------------|---------------------------------------------------------------------------------|
|              |                 |                 |                 |                                                | bow anchors                                                                | stern anchors  |                                      |                                                                                 |
| D            | L <sub>*/</sub> | B <sub>*/</sub> | d <sub>*/</sub> | H <sub>M</sub>                                 | M <sub>B</sub>                                                             | M <sub>S</sub> | l                                    |                                                                                 |
| (t)          | (m)             | (m)             | (m)             | (m)                                            | (kg)                                                                       | (kg)           | (m)                                  |                                                                                 |
| 1            | 2               | 3               | 4               | 5                                              | 6                                                                          | 7              | 8                                    | 9                                                                               |
| 200          | 40              | 6               | 1.2             | 6.0                                            | 2 x100, Matrosovs                                                          | -              | 2x75                                 | River Nemunas, Kaunas-Jurbarkas                                                 |
| 200          | 40              | 6               | 1.5             | 6.0                                            | 2 x100, Matrosovs                                                          | -              | 2x75                                 | River Nemunas, Klaipeda-Kaunas                                                  |

**Tables 2: Pushers**

| Power of engine | Designed maximum carrying capacity of convoy pushed | Number, type and weight of stern anchors calculated according to national requirements | Length of chain of stern anchors | Additional observations:<br>Main region (zone) of operation, vessels for carrying light voluminous cargo, etc. |
|-----------------|-----------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------|----------------------------------------------------------------------------------------------------------------|
| P               | CC                                                  | M <sub>S</sub>                                                                         | l                                |                                                                                                                |
| (kW)            | (t)                                                 | (kg)                                                                                   | (m)                              |                                                                                                                |
| 1               | 2                                                   | 3                                                                                      | 4                                | 5                                                                                                              |
| 600             | 1000                                                | 2x150, Matrosovs                                                                       | 2x100                            | River Nemunas, Kurshskiy Zaliv (construction material, coal, timber, containers)                               |

<sub>\*/</sub> L - Length, B - Beam and d - Draught of vessels

**Table 3: Self-propelled pusher vessels**

| Power of engine | Designed maximum carrying capacity of convoy pushed | Number, type and weight (calculated according to national requirements) of |                               | Length of chain of bow/stern anchors | Additional observations: Main region (zone) of operation, vessels for carrying light voluminous cargo, etc. |
|-----------------|-----------------------------------------------------|----------------------------------------------------------------------------|-------------------------------|--------------------------------------|-------------------------------------------------------------------------------------------------------------|
|                 |                                                     | bow anchors                                                                | stern anchors                 |                                      |                                                                                                             |
| P<br>(kW)       | CC<br>(t)                                           | M <sub>s</sub><br>(kg)                                                     | M <sub>s</sub><br>(kg)        | l<br>(m)                             |                                                                                                             |
| 1               | 2                                                   | 3                                                                          | 4                             | 5                                    | 6                                                                                                           |
| 220             | 300+600=900                                         | 2x125, Matrosov                                                            | 1x1,250<br>(four arms anchor) | 50+75/25                             | River Nemunas, Kurshskiy Zaliv<br>(construction material, coal, timber)                                     |

**Table 4: Pushed barges**

| Dimensions  |             |             | Carrying capacity | Number, type and weight of bow anchors calculated according to national requirements | Length of chain of bow anchors | Additional observations: Main region (zone) of operation, vessels for carrying light voluminous cargo, etc. |
|-------------|-------------|-------------|-------------------|--------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------------------------------------------------------------|
| L */<br>(m) | B */<br>(m) | d */<br>(m) | CC<br>(t)         | M <sub>B</sub><br>(kg)                                                               | l<br>(m)                       |                                                                                                             |
| 1           | 2           | 3           | 4                 | 5                                                                                    | 6                              | 7                                                                                                           |
| 72          | 12          | 1.1         | 600               | 2x200, Matrosov                                                                      | 75/100                         | River Nemunas,<br>Jurbarkas-Kaunas (construction material, coal, timber, containers)                        |
| 72          | 12          | 1.5         | 1050              | 2x200, Matrosov                                                                      | 75/100                         | Klaipeda-Kaunas                                                                                             |

ROMANIA

**Table 1: Passenger vessels**

| Displacement | Dimensions              |                         |                         | Mean height of superstructure above waterline | Number, type and weight (calculated according to national requirements) of |                        | Length of chain of bow/stern anchors | Additional observations:<br>Main region (zone) of operation of the vessel, etc. |
|--------------|-------------------------|-------------------------|-------------------------|-----------------------------------------------|----------------------------------------------------------------------------|------------------------|--------------------------------------|---------------------------------------------------------------------------------|
|              |                         |                         |                         |                                               | bow anchors                                                                | stern anchors          |                                      |                                                                                 |
| D<br>(t)     | L <sup>*</sup> /<br>(m) | B <sup>*</sup> /<br>(m) | d <sup>*</sup> /<br>(m) | H <sub>M</sub><br>(m)                         | M <sub>B</sub><br>(kg)                                                     | M <sub>S</sub><br>(kg) | l<br>(m)                             |                                                                                 |
| 1            | 2                       | 3                       | 4                       | 5                                             | 6                                                                          | 7                      | 8                                    | 9                                                                               |
| 14           | 14.2                    | 4.1                     | 0.4                     | 3.1                                           | 2X75, Hall                                                                 | -                      | 2x30/-                               | Danube, 30 passengers                                                           |
| 60           | 24.0                    | 4.8                     | 1.2                     | 3.0                                           | 2X150, Speck                                                               | -                      | 2x30/-                               | Danube, 25 passengers                                                           |
| 59           | 25.1                    | 5.1                     | 0.8                     | 3.1                                           | 2X150, Hall                                                                | -                      | 2x50/-                               | Danube, 60 passengers                                                           |
| 61           | 24.0                    | 4.5                     | 1.5                     | 3.4                                           | 2X150, Hall                                                                | -                      | 2x50/-                               | Danube, 120 passengers                                                          |
| 85           | 27.7                    | 6.3                     | 1.0                     | 3.6                                           | 2X175, Hall                                                                | -                      | 2x50/-                               | Danube, 90 passengers                                                           |
| 226          | 45.2                    | 7.1                     | 1.5                     | 4.2                                           | 2X200, Hall                                                                | -                      | 1x50+1x75/-                          | Danube, 150 passengers                                                          |
| 472          | 61.4                    | 11.3                    | 1.8                     | 6.6                                           | 2X350, Hall                                                                | -                      | 1x50+1x75/-                          | Danube, 300 passengers                                                          |

**Tables 2: Pushers**

| Power of engine | Designed maximum carrying capacity of convoy pushed | Number, type and weight of stern anchors calculated according to national requirements | Length of chain of stern anchors | Additional observations:<br>Main region (zone) of operation, vessels for carrying light voluminous cargo, etc. |
|-----------------|-----------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------|----------------------------------------------------------------------------------------------------------------|
| P               | CC                                                  | M <sub>s</sub>                                                                         | l                                |                                                                                                                |
| (kW)            | (t)                                                 | (kg)                                                                                   | (m)                              |                                                                                                                |
| 1               | 2                                                   | 3                                                                                      | 4                                | 5                                                                                                              |
| 2x220           | 2000                                                | 2x200, Hall                                                                            | 2x75                             | Danube, max. 6 km/h                                                                                            |
| 2x295           | 3000                                                | 2x400, Hall                                                                            | 2x100                            | "                                                                                                              |
| 2x310           | 3000                                                | 2x500, Speck                                                                           | 2x75                             | "                                                                                                              |
| 2x600           | 6000                                                | 2x900, Hall                                                                            | 2x75                             | "                                                                                                              |
| 2x655           | 6000                                                | 2x650, Hall                                                                            | 2x75                             | "                                                                                                              |
| 2x880           | 9000                                                | 2x930, Hall                                                                            | 2x75                             | "                                                                                                              |
| 2x925           | 9000                                                | 2x2100, Speck                                                                          | 2x100                            | "                                                                                                              |
| 2x1000          | 9000                                                | 2x1750, Speck                                                                          | 2x75                             | "                                                                                                              |
| 2x1325          | 12000                                               | 2x1500, Speck                                                                          | 2x82.5                           | "                                                                                                              |
| 2x1765          | 18000                                               | 2x1320, Hall                                                                           | 2x75                             |                                                                                                                |

**Table 3: Self-propelled pusher vessels**

| Power of engine | Designed maximum carrying capacity of convoy pushed | Number, type and weight (calculated according to national requirements) of |                        | Length of chain of bow/stern anchors | Additional observations: Main region (zone) of operation, vessels for carrying light voluminous cargo, etc. |
|-----------------|-----------------------------------------------------|----------------------------------------------------------------------------|------------------------|--------------------------------------|-------------------------------------------------------------------------------------------------------------|
|                 |                                                     | bow anchors                                                                | stern anchors          |                                      |                                                                                                             |
| P<br>(kW)       | CC<br>(t)                                           | M <sub>s</sub><br>(kg)                                                     | M <sub>s</sub><br>(kg) | l<br>(m)                             |                                                                                                             |
| 1               | 2                                                   | 3                                                                          | 4                      | 5                                    | 6                                                                                                           |
| 2x650           | 4000                                                | 2x700, Speck                                                               | 2x1000, Speck          | 2x100/2x75                           | Danube, max. 6 km/h                                                                                         |

**Table 4: Pushed barges**

| Dimensions  |             |             | Carrying capacity | Number, type and weight of bow anchors calculated according to national requirements | Length of chain of bow anchors | Additional observations: Main region (zone) of operation, vessels for carrying light voluminous cargo, etc. |
|-------------|-------------|-------------|-------------------|--------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------------------------------------------------------------|
| L */<br>(m) | B */<br>(m) | d */<br>(m) | CC<br>(t)         | M <sub>B</sub><br>(kg)                                                               | l<br>(m)                       |                                                                                                             |
| 1           | 2           | 3           | 4                 | 5                                                                                    | 6                              | 7                                                                                                           |
| 61.4        | 11.0        | 2.0         | 1000              | 1x1920, Hall                                                                         | 1x75                           | Danube, max. 6 km/h                                                                                         |
| 71.0        | 11.0        | 1.8         | 1000              | 2x600, Hall                                                                          | 2x75                           | “                                                                                                           |
| 70.2        | 11.0        | 2.5         | 1300              | 1x2000, Hall                                                                         | 1x120                          | “                                                                                                           |
| 71.0        | 11.0        | 2.4         | 1500              | 1x1000, Hall                                                                         | 1x110                          | “                                                                                                           |
| 70.3        | 11.0        | 2.5         | 1500              | 1x1980, Hall                                                                         | 1x120                          | “                                                                                                           |
| 76.5        | 11.0        | 2.7         | 1700              | 1x1250, Hall                                                                         | 1x100                          | “                                                                                                           |
| 76.2        | 11.0        | 3.0         | 2000              | 1x1920, Hall                                                                         | 1x100                          | “                                                                                                           |
| 76.5        | 11.0        | 3.1         | 2000              | 1x1920, Hall                                                                         | 1x100                          | “                                                                                                           |
| 86.3        | 11.0        | 2.9         | 2000              | 1x1740, Hall                                                                         | 1x100                          | “                                                                                                           |
| 89.0        | 11.0        | 3.8         | 3000              | 1x2100, Hall                                                                         | 1x100                          | “                                                                                                           |

## RUSSIAN FEDERATION

**Table 1: Passenger vessels**

| Displacement | Dimensions              |                         |                         | Mean height of super-structure above waterline | Number, type and weight (calculated according to national requirements) of |                                 | Length of chain of bow/stern anchors | Additional observations:<br>Main region (zone) of operation of the vessel, etc. |
|--------------|-------------------------|-------------------------|-------------------------|------------------------------------------------|----------------------------------------------------------------------------|---------------------------------|--------------------------------------|---------------------------------------------------------------------------------|
|              |                         |                         |                         |                                                | bow anchors                                                                | stern anchors                   |                                      |                                                                                 |
| D<br>(t)     | L <sup>*</sup> /<br>(m) | B <sup>*</sup> /<br>(m) | d <sup>*</sup> /<br>(m) | H <sub>M</sub><br>(m)                          | M <sub>B</sub><br>(kg)                                                     | M <sub>S</sub><br>(kg)          | l<br>(m)                             |                                                                                 |
| 1            | 2                       | 3                       | 4                       | 5                                              | 6                                                                          | 7                               | 8                                    | 9                                                                               |
| 3850         | 129                     | 16                      | 2.85                    | 13.8                                           | 2x1575 of enhanced holding power                                           | 1x855 of enhanced holding power | 175 and 150/125                      | Navigational zone 1 ("M" basin)                                                 |
| 1390         | 90.2                    | 13.5                    | 1.66                    | 11                                             | 2x1000, Hall                                                               | 1x500, Hall                     | 125 and 100/75                       | Navigational zone 2 ("O" basin)                                                 |
| 35.0         | 24.3                    | 3.96                    | 0.68                    | 5.2                                            | 2x35, Matrosov, of enhanced holding power                                  | -                               | 60, steal anchor line                | Navigational zone 3 ("P" basin)                                                 |

**Tables 2: Pushers**

| Power of engine | Designed maximum carrying capacity of convoy pushed | Number, type and weight of stern anchors calculated according to national requirements | Length of chain of stern anchors | Additional observations:<br>Main region (zone) of operation, vessels for carrying light voluminous cargo, etc. |
|-----------------|-----------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------|----------------------------------------------------------------------------------------------------------------|
| P<br>(kW)       | CC<br>(t)                                           | M <sub>S</sub><br>(kg)                                                                 | l<br>(m)                         |                                                                                                                |
| 1               | 2                                                   | 3                                                                                      | 4                                | 5                                                                                                              |
| 810             | 9000                                                | 1x1750, Hall                                                                           | 300, steal anchor line           | Navigational zone 2 ("O" basin)                                                                                |
| 1765            | 15000                                               | 2x1250, Hall                                                                           | 125                              | Navigational zone 2 ("O" basin)                                                                                |
| 220             | 2000                                                | 1x125, Matrosov                                                                        | 120, steal anchor line           | Navigational zone 3 ("P" basin)                                                                                |

**Table 3: Self-propelled pusher vessels**

| Power of engine | Designed maximum carrying capacity of convoy pushed | Number, type and weight (calculated according to national requirements) of |                        | Length of chain of bow/stern anchors | Additional observations: Main region (zone) of operation, vessels for carrying light voluminous cargo, etc. |
|-----------------|-----------------------------------------------------|----------------------------------------------------------------------------|------------------------|--------------------------------------|-------------------------------------------------------------------------------------------------------------|
|                 |                                                     | bow anchors                                                                | stern anchors          |                                      |                                                                                                             |
| P<br>(kW)       | CC<br>(t)                                           | M <sub>s</sub><br>(kg)                                                     | M <sub>s</sub><br>(kg) | l<br>(m)                             |                                                                                                             |
| 1               | 2                                                   | 3                                                                          | 4                      | 5                                    | 6                                                                                                           |
| 2x331=662       | 2000                                                | 1x1500 and<br>1x1250, Hall                                                 | 1x1000, Hall           | 175 and 175/75                       | Navigational zone 1 ("M" basin)                                                                             |
| 2x880=1760      | 11400                                               | 2x1750, Hall                                                               | 2x1250, Hall           | 155 and 155/75                       | Navigational zone 2 ("O" basin)                                                                             |
| 165.5           | 300                                                 | 1x150, Matrosov                                                            | 1x100, Matrosov        | 75/75, steal anchor line             | Navigational zone 3 ("P" basin)                                                                             |

**Table 4: Pushed barges**

| Dimensions  |             |             | Carrying capacity | Number, type and weight of bow anchors calculated according to national requirements | Length of chain of bow anchors | Additional observations: Main region (zone) of operation, vessels for carrying light voluminous cargo, etc. |
|-------------|-------------|-------------|-------------------|--------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------------------------------------------------------------|
| L */<br>(m) | B */<br>(m) | d */<br>(m) |                   |                                                                                      |                                |                                                                                                             |
| 1           | 2           | 3           | CC<br>(t)         | M <sub>B</sub><br>(kg)                                                               | l<br>(m)                       |                                                                                                             |
| 1           | 2           | 3           | 4                 | 5                                                                                    | 6                              | 7                                                                                                           |
| 85.7        | 16.5        | 2.55        | 2500              | 2x1000, Hall                                                                         | 150 and 150                    | Navigational zone 1 ("M" basin)                                                                             |
| 113         | 16.5        | 3.48        | 5000              | 2x1250, Hall                                                                         | 100 and 100                    | Navigational zone 2 ("O" basin)                                                                             |
| 91.0        | 15.5        | 2.6         | 2000              | 2x800, Hall                                                                          | 102 and 77                     | Navigational zone 3 ("P" basin)                                                                             |