



Ministerie van Infrastructuur  
en Waterstaat



# CESNI/QP/CREW: Maximale flexibiliteit bij samenstellen bemanning?

Nationaal Binnenvaart Congres | Europese  
standaarden voor opleidingen en bemanning

Diergaarde Blijdorp | 3 oktober 2019

Bart van Gent | Beleidsmedewerker  
Binnenvaart



# Achtergrond

- > 2013: Rapport Kennisinstituut voor Mobiliteitsbeleid (KiM)
- > 2014: Op agenda Centrale Commissie voor de Rijnvaart (CCR)
- > 2018: TASCs werkbelastingsonderzoek – 50 schepen bezocht



- > Advies: Crew manning calculation tool
- > 2019: Begin werkgroep CESNI/QP/CREW



# Uitgangspunten Infrastructuur & Waterstaat

- › Minimumbemanning: veiligheid
- › Modernisering – waarom?
  - Flexibel
  - Robuust
  - Toekomstbestendig
  - Handhaafbaar





# Huidige situatie: bemanningstabellen (RSP)

## Artikel 3.15. Minimumbemanning van motorschepen en duwboten



1. De minimumbemanning van motorschepen en duwboten bestaat uit:

Groep	Bemanningsleden	Aantal bemanningsleden bij de exploitatiewijze A1, A2 of B en voor de uitrustingsstandaard S1 of S2						
		A1		A2		B		
		S1	S2	S1	S2	S1	S2	
1	L ≤ 70 m	schipper	1		2		2	2
		stuurman	-		-		-	-
		volmatroos	-		-		-	-
		matroos	1		-		1	-
	lichtmatroos	-		-		1 <sup>1)</sup>	2 <sup>1)3)</sup>	
2	70 m < L ≤ 86 m	schipper	1 of	1	1	2	2	2
		stuurman	-	-	-	-	-	-
		volmatroos	1	-	-	-	-	-
		matroos	-	1	1	-	2	1
		lichtmatroos	-	1	1	1 <sup>1)</sup>	-	1
3	L > 86 m	schipper	1 of	1	1	2	2	2
		stuurman	1	1	1	-	-	of 1 <sup>2)</sup> 1
		volmatroos	-	-	-	-	-	1
		matroos	1	-	-	1	-	1
		lichtmatroos	-	2	1	1 <sup>1)</sup>	2 <sup>1)</sup>	2

## Artikel 3.16



Minimumbemanning van hechte samenstellen en andere hechte samenstellingen

1. De minimumbemanning van hechte samenstellen en andere hechte samenstellingen bestaat uit:

Groep	Bemanningsleden	Aantal bemanningsleden bij de exploitatiewijze A1, A2 of B en voor de uitrustingsstandaard S1 of S2					
		A1		A2		B	
		S1	S2	S1	S2	S1	S2
1	afmeting van het samenstel L ≤ 37 m B ≤ 15 m	schipper	1		2		2
		stuurman	-		-		-
		volmatroos	-		-		-
		matroos	1		-		1
		lichtmatroos	-		-		1 <sup>1)</sup>
	machinist	-		-		-	
2	afmeting van het samenstel 37 m < L ≤ 86 m B ≤ 15 m	schipper	1 of	1	1	2	2
		stuurman	-	-	-	-	-
		volmatroos	1	-	-	-	-
		matroos	-	1	1	-	2



# Toekomst: Crew Manning Calculation Tool?

Ship type:

Sailing time for the complete stretch:

Sailing assistance:

Load [t]:

Number of trainees:

Number of locks:

Loading capacity [t/h]:

Unloading capacity [t/h]:

Task	Beutmeester	Beutman
<b>Navigation</b> voyage planning, sailing/steering/trimming, in-/mooring, heaving, anchoring, organize and control work on board, wheelhouse leaving Automation level: <input type="text" value="0 - No automation"/> Navigation conditions (traffic density, night, confined waters): <input type="text" value="Normal"/>		
<input checked="" type="checkbox"/> <b>Operation of the craft</b> bunkering, ballast water management, waste management		
<input checked="" type="checkbox"/> <b>Cargo handling, stowage and passage/transport</b> planing port orders, freight classification, stowage control, including strength and stability, check speed of sea loading, work and behavior safety according ADPs and PMS regulations, check and control stowage together with safety personnel at load/unloading in the port's specifications, fire protection, organizing handling of residual freight, controlling freight-handling equipment, organize stowage of containers, arrange the barge formation, control coupling vessel with barge, control coupling distance <input type="checkbox"/> <b>Dangerous goods (ADG)</b>		
<input checked="" type="checkbox"/> <b>Inspection</b> periodic inspection of ship, watch/handover/office systems, HSE and ADP systems, portable water, canal/banking and landing, dock, mooring facilities Machines and systems are equipped with sensors and bridge displays: <input type="text" value="None"/>		
<input checked="" type="checkbox"/> <b>Maintenance/Repair</b> provision, installation, organizing permanent stock of spare parts and supplies consumables, update info for navigation, execution of software updates, planning external maintenance Crew of equipment: <input type="text" value="Full crew"/>		
<input checked="" type="checkbox"/> <b>Housekeeping</b> (cooking, cleaning living rooms) by regular crew <input checked="" type="checkbox"/> <b>Communication</b> people management crew, shift handover, organization and execution of tasks, mediate in conflict situation with crew / passengers		
<input checked="" type="checkbox"/> <b>HSE, Emergencies, Calamities</b> general working rule and rest time (night), develop safety plans, instruct the crew members into their safety roles, safety drill		
<input checked="" type="checkbox"/> <b>Entertaining</b> organization, entertainment, recreational, personnel administration, welfare support, ship community		
<input checked="" type="checkbox"/> <b>Other tasks</b> studying, writing, personal hygiene, teaching of business		
<input checked="" type="checkbox"/> <b>Recovery/Pause/Rest, leisure, sleep, being standby</b> pause, leisure, sleep, being standby	<input type="text" value="0"/> h/day	<input type="text" value="0"/> h/day
<input checked="" type="checkbox"/> <b>Travel</b> contributing to vessel	<input type="text"/>	<input type="text"/>
<b>Calculate</b>		
	loading/unloading [t]	
	total journey duration [h]	
	Total hours of work (simultaneity considered):	







# Toekomst: Crew Manning Calculation Tool?

Ship type: [Motor cargo vessel]

Sailing time for the complete stretch[h]: [0]

Sailing conditions (traffic density, sight, confined waters): [Normal]

Automation level: [0 - No automation]

Navigation conditions (traffic density, sight, confined waters): [Normal]

Operation of the craft  
bunkering, ballast water management, waste management

Cargo handling, stowage and passenger transport  
planning port actions, freight documentation, freight control, controlling strength and stability. Check sp the port's specifications, fire protection, organizing handling of residual freight, controlling freight handling  
 Dangerous goods (ADN)

Inspection  
periodic inspection of ship, nautical hardware/software systems, HSE and ADN systems, potable water  
Machines and systems are equipped with sensors and bridge displays: [None]

Maintenance/Repair  
Preparation, coordination, organizing permanent stock of spare parts and supplies consumables, update info for navigation, execution of software updates, planning external maintenance  
State of equipment: [brand-new]

Housekeeping (cooking, cleaning living rooms) by regular crew

Communication  
people management crew, shift handover, organization and execution of training, mediate in conflict situations with crew / passengers

HSE, Emergencies, Calamities  
control working time and rest time (shifts), develop safety plans, instruct the crew members into their safety

Entrepreneurship  
acquisition, accountancy commercial accounting, personnel administration, customer support, ship acquisition

Other tasks  
studying, waiting, personal hygiene, teaching of trainees

Recovery/Pause pause, leisure, sleep, being standby  
pause, leisure, sleep, being standby

Travel  
commuting to vessel

Calculate

load/unloading [h]: [0]

total journey duration [h]: [0]

Total hours of work (simultaneity considered): [0]

Ship type: [Motor cargo vessel]

Sailing time for the complete stretch[h]: [0]

**Task**

**Navigation**  
voyage planning, sailing/navigating/manoeuvring, (un-)mooring, hauling, anchoring, organize and control

Automation level: [0 - No automation]

Navigation conditions (traffic density, sight, confined waters): [Normal]

Operation of the craft  
bunkering, ballast water management, waste management

Cargo handling, stowage and passenger transport  
planning port actions, freight documentation, freight control, controlling strength and stability. Check sp the port's specifications, fire protection, organizing handling of residual freight, controlling freight handling  
 Dangerous goods (ADN)

Inspection  
periodic inspection of ship, nautical hardware/software systems, HSE and ADN systems, potable water  
Machines and systems are equipped with sensors and bridge displays: [None]

Maintenance/Repair  
Preparation, coordination, organizing permanent stock of spare parts and supplies consumables, update  
State of equipment: [brand-new]

Housekeeping (cooking, cleaning living rooms) by regular crew

Communication  
people management crew, shift handover, organisation and execution of training, mediate in conflict situations with crew / passengers

HSE, Emergencies, Calamities  
control working time and rest time (shifts), develop safety plans, instruct the crew members into their safety

Entrepreneurship  
acquisition, accountancy commercial accounting, personnel administration, customer support, ship acquisition

Other tasks  
studying, waiting, personal hygiene, teaching of trainees

Recovery/Pause pause, leisure, sleep, being standby  
pause, leisure, sleep, being standby

Travel  
commuting to vessel



# Toekomst: Crew Manning Calculation Tool?

Ship type:

Sailing time for the complete stretch [h]:

Sailing transits:

Load [t]:

Number of trainees:

Number of locks:

Loading capacity [t/h]:

Unloading capacity [t/h]:

Task

Navigation  
voyage planning, sailing/navigating/manoeuvring, (un-)mooring, hauling, anchoring, organize and control

Automation level:

Navigation conditions (traffic density, sight, confined waters):

Operation  
bunkering, etc.

	<b>Boatmaster</b>	<b>Boatman</b>
loading/unloading [h]:		
Total journey duration [h]:		
Total hours of work(simultaneity considered):		
<b>Number of crew members (not considering the above mentioned factors):</b>		

Other tasks

Recovery/Pause pause, leisure, sleep, being standby

Travel

Calculate

loading/unloading [h]:

total journey duration [h]:

Total hours of work(simultaneity considered):

HSE, Emergencies, Calamities

Entrepreneurship

Other tasks

Recovery/Pause pause, leisure, sleep, being standby

Travel





# Uitgangspunten Infrastructuur & Waterstaat

- > Minimumbemanning: veiligheid → Gebaseerd op werkbelasting
  
- > Modernisering – waarom?
  - Flexibel → Verantwoordelijkheid schipper
  - Robuust → EU-brede basis (verordening)
  - Toekomstbestendig → Voorziet in automatisering
  - Handhaafbaar → Elektronische controlemiddelen?



## En nu?



- › CESNI/QP/CREW (Europees Comité standaarden binnenvaart)
  - Q2 2020 Technisch advies mogelijkheden – CESNI
  - 2020-2021 Uitwerking bemanningsvoorschriften – CESNI
  - 2022-2024 Verordening – Europese Commissie
  
- › Randvoorwaarde: Richtlijn Elektronische Controlemiddelen
  - Efficiëntere controle
  - Minder administratie (dienstboekje + vaartijdenboek → crew member card)
  - Gelijk speelveld en goed werkgeverschap



Ministerie van Infrastructuur  
en Waterstaat

Contact: [bart.van.gent@minienw.nl](mailto:bart.van.gent@minienw.nl)

