



**Smart Control Manager**  
The New Standard in Viscosity Control

**Noah SBMA**



Public Procurement  
Service



K-INNOVATIVE  
PRODUCT

Public Procurement  
Service



Marine and Fisheries New Technology!

# Completed in just 3 hours – Smart Viscosity Control

Smart Viscosity Control

**No flame work**

**“Safe installation without welding”**

No welding or cutting inside the vessel  
→ Reduced safety risks and simplified  
work-permit procedures

**No structural modification**

**“Keep all pipelines and upgrade  
only the control system”**

Keep all installed pipelines and  
equipment intact → Shorter replacement  
time and lower construction costs

**No downtime**

**“Replacement completed within 3  
hours without halting operation”**

Replacement possible during docking  
schedule → No delays in sailing schedule

The fastest

## Viscosity control system replacement

SCM has dramatically reduced both cost and time involved in replacing discontinued sensors with the latest models and restoring the system.



### STEP 01

#### Remove existing sensors

VAF, NAKAKITA, OMC, DAEHO, MARSEN, etc.



### STEP 02

#### Install new viscosity sensors

Electronic viscosity sensor



### STEP 03

#### Install SCM

Replacement work **completed in 3 hours**

# Noah SBMA

## Product Overview

### SCM-01



Weight	Approximately 2.5 kg
Dimensions	246mm × 168mm × 81mm (W×H×D)
Operation System	Touchscreen
Power	AC 220V, 60Hz, 15Wmax
IP Grade	N/A (Panel-mounted Type)
Input	Viscosity: 4 ~ 20mA, DC 24V Temperature: 4 ~ 20mA, DC 24V or Temperature: PT 100 Ω
Output	Viscosity: 4 ~ 20mA, DC 24V Temperature: 4 ~ 20mA, DC 24V 4 ~ 20mA, DC 24V for Electric Pneumatic regulator 4 ~ 20mA, DC 24V for valve 220VAC, Relay for valve Alarm1, Alarm2

Weight Approximate 3.0 kg

Dimensions 260mm × 160mm × 95mm (W×H×D)

Operation System Touchscreen

Power AC 220V, 60Hz, 15Wmax

IP Grade IP44

Input Viscosity: 4 ~ 20mA, DC 24V  
Temperature: 4 ~ 20mA, DC 24V  
or Temperature: PT 100 Ω

Output Viscosity: 4 ~ 20mA, DC 24V  
Temperature: 4 ~ 20mA, DC 24V  
4 ~ 20mA, DC 24V for Electric Pneumatic regulator  
4 ~ 20mA, DC 24V for valve  
220VAC, Relay for valve  
Alarm1, Alarm2

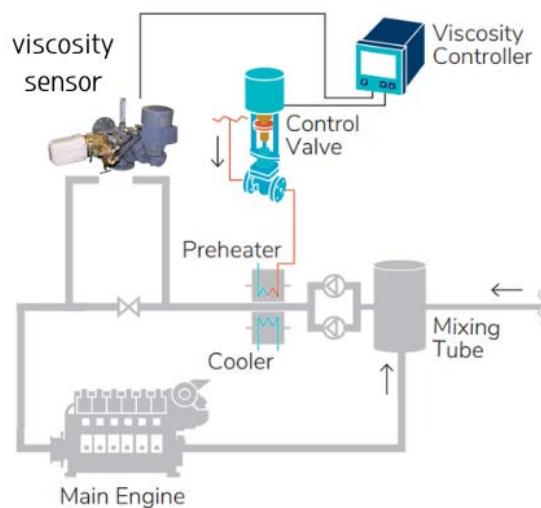
### SCM-02



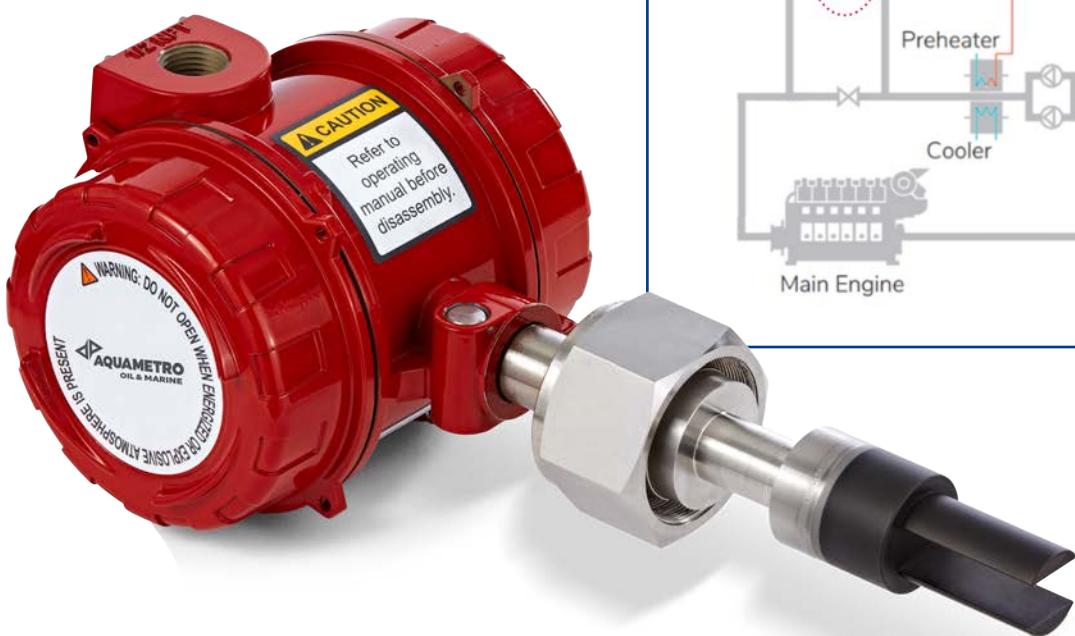
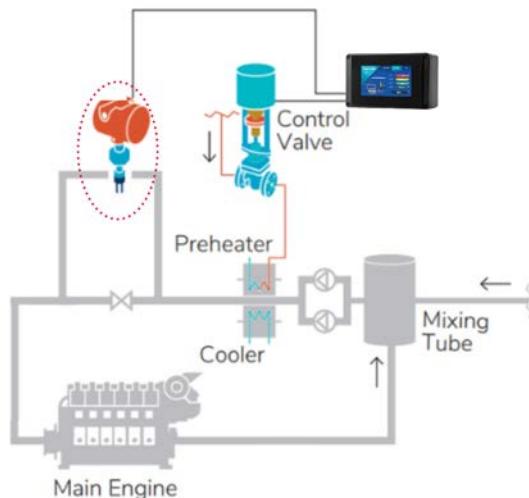
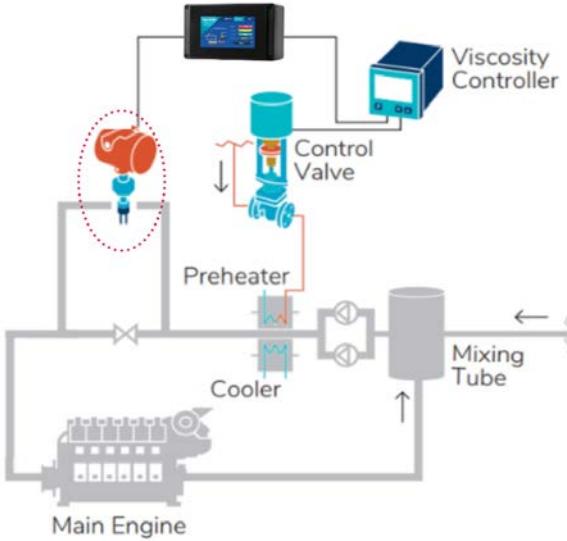


Noah SBMA uses genuine AquaMetro viscosity sensors, verified by shipyards for over 10 years.

### Old viscosity system



### Solution



Noah SBMA

## Track Record & Field Applications

### HMM

- Replaced NAKAKITA systems with SBM
- System replacement: 3 hours per unit → 6 units on 3 vessels completed



### KLC SM

- Reliability verified through 2 years of trial operation on container ships
- 2 vessels in dock: 8 SBM units replaced
- Replacement completed within 6 hours when existing products could not be repaired
- Successfully stabilized 14 automatic viscosity systems to date



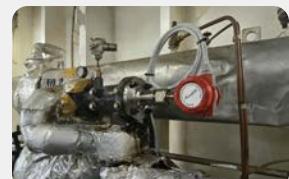
## HJ Shipbuilding & Construction

- Commissioning completed on 4 units across 2 new container ships
- An additional contract for 8 units on 4 vessels has been signed (N286/287/288/289)
- Shipyard references have been secured



## SK Shipping

- Completed the review for adoption
- Initial application for inspection vessels; a fleet-wide expansion is planned



## Our customers



Hyundai Merchant Marine



SM Group



SK Shipping



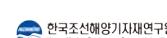
AquaMetro



STX Marine Service



Korea Institute of Maritime and Fisheries Technology



Korea Marine Equipment Research Institute



Danaos (planned)



HJ Shipbuilding & Construction



K Shipbuilding



Designated as an Innovative Product by the Public Procurement Service

# Noah SBMA

## Certifications & Intellectual Property

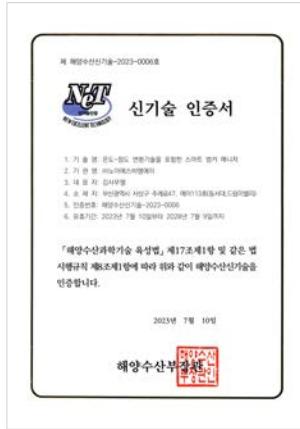
SCM is a technically validated product.



Patent No. 10-2673206  
[Ship Fuel Oil Management  
Device and Method]



Patent No. 10-2764670  
[Ship Control Device and Method  
for Managing Ship Fuel Systems]



Marine and Fisheries  
New Technology  
2023-0006



Innovative Product  
Designation Certificate



CE Certificate



GERMAN CERT-01



GERMAN CERT-02



GERMAN CERT-03



GERMAN CERT-04



KC Certificate\_SC-01



KC Certificate\_SC-02



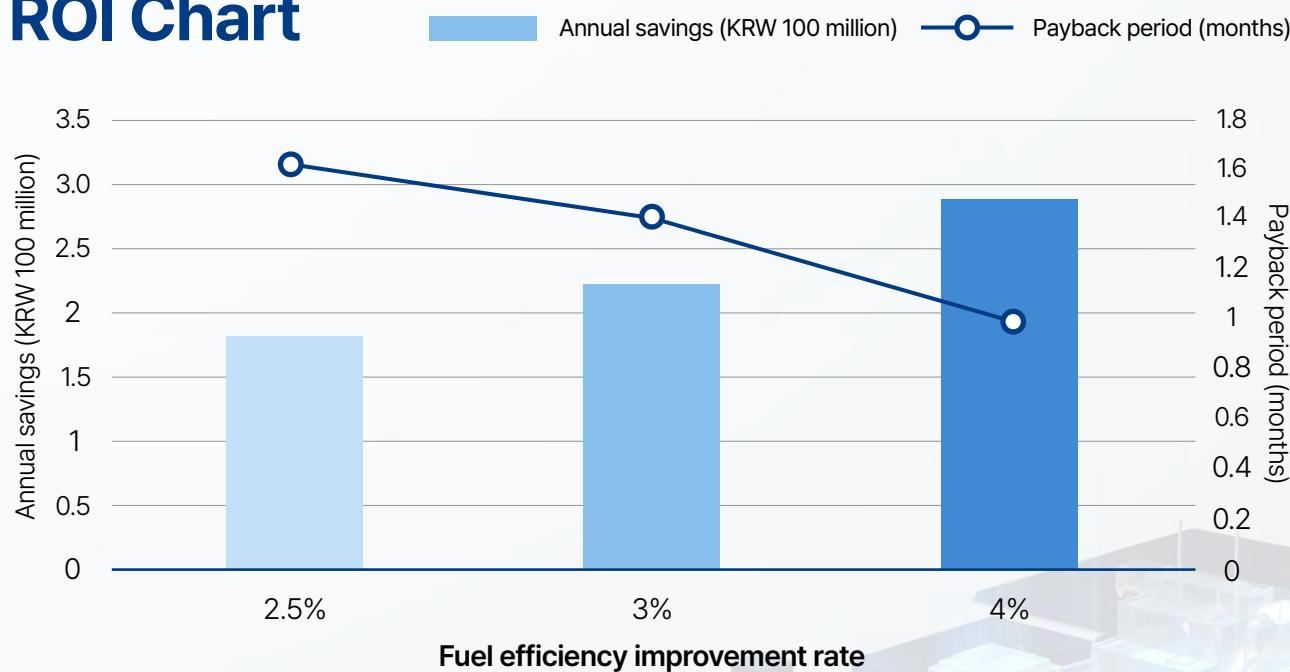
Venture Company Certificate

# Return on Investment (ROI)

## Economic Feasibility Analysis

Parameters	Reference	Basis
Annual fuel cost (per vessel)	KRW 7.38 billion	Average of HMM and SK Shipping
SCM installation cost	KRW 25 million (per set)	Based on user-provided data
Fuel efficiency improvement rate	2.5% ~ 4.0%	Viscosity and temperature stabilization
Installation time reduction	60h → 3h (57 h reduction in operational loss)	Based on Brochure performance data
Operational loss cost (container ship)	Approx. KRW 43 million/day	IR materials

## ROI Chart



SCM installation cost

**KRW 25 million**

Annual savings

**KRW 180 – 290 million**

(based on installation cost of KRW 25million)

**Full payback** within 1–2 months

**Over 10x higher economic return**

based on fuel-efficiency improvement.



Public Procurement  
Service



K-INNOVATIVE  
PRODUCT  
Public Procurement  
Service

Certificate No. 2025 - 279		Public Procurement Service				
<b>CERTIFICATE OF INNOVATIVE PRODUCT</b>						
01 COMPANY	NOAH SBMA Co., Ltd. Business Registration No. 252 - 87 - 01519					
02 ADDRESS	311, 3rd Flr, Busan Knowledge Industry Center (JinBanchi), 2 Sinsun-ro, Nam-gu, Busan, Republic of Korea					
03 PRODUCT	SCM (Smart Control Manager: Digital Marine Fuel Viscosity Controller)					
04 Period of Validity	From September 22, 2025 to September 22, 2028					
<p>This is to certify that the above mentioned product is an INNOVATIVE PRODUCT in accordance with subparagraph 2 of Article 33(1) of ENFORCEMENT DECREE OF THE GOVERNMENT PROCUREMENT ACT and Article 11(1) of REGULATION ON DESIGNATION OF THE INNOVATIVE PRODUCT AND PROMOTION OF PURCHASE.</p> <p><i>Seung-bo Baek</i></p> <p>Name: Baek, Seung-bo Title: Administrator</p> <p>Public Procurement Service</p>						
						
Certificate No. 2025 - 279						
<b>PRODUCT CERTIFICATION SPECIFICATION</b>						
No.	Model	Product Classification Code (10 digits)	Product Name (8 digits)	Product Serial Code (8 digits)	Date of Registration	Remarks
1	SCM-01	4110331201	25814500	2025.09.23		
2	SCM-02	4110331201	25814645	2025.09.23		

## What is an Innovative Product?

An innovative product is designated through a review process that evaluates public value, innovation, and other criteria to enhance public services and technological advancement. There are two types: Type 1 (excellent research-based products, certified innovative public procurement products) and Type 2 (innovative prototype products).

### What are the benefits of purchasing innovative products Designated by the Public Procurement Service?

- ◆ Eligible for private contract awards without amount limits under the Act on Contracts to Which the State Is a Party and the Act on Contracts to Which a Local Government Is a Party
  - \* Enforcement Decree of the Act on Contracts to Which the State Is a Party, Article 26(1)5(d) / Act on Contracts to Which a Local Government Is a Party Enforcement Decree, Article 25(1)8(c)
- ◆ Procurement support for innovative products through institutional exemption measures for purchasing officers
  - \* Government Procurement Act, Article 27(4): exemption applies unless intent or gross negligence is proven
- ◆ Achievable innovative product purchase ratio targets and organizational performance evaluation
  - \* Public Procurement Service Innovative Product Purchase Guidelines, Article 27(4): exemption applies unless gross negligence is proven
- ◆ Technology development products eligible for priority purchase
  - \* Under the Act on Facilitation of Purchase of SME-Manufactured Products and Support for Development of Their Markets, Article 13, and its Enforcement Decree, Article 12, public institutions must purchase at least 15% of their SME procurement volume as technology development products (Article 13)
- ◆ Eligible for pilot use funded by the Public Procurement Service budget
- ◆ Innovative Products are searchable and purchasable via the Innovation Marketplace platform (linked with the KONEPS contract system)
- ◆ Outstanding purchasing institutions and officers may be recognized and awarded annually.

# *Noah* **SBMA**

**NOAH SBMA Co., Ltd.**

Unit 311, Busan Knowledge Industry Center (Uam Branch), 2 Sinsun-ro, Nam-gu, Busan, South Korea

**Tel** +82-51-328-9477

**Fax** +82-51-980-0630

**E-mail** [sbm@noahms.com](mailto:sbm@noahms.com)