

TECHNICAL STANDARDS & SAFETY AUTHORITY

14th Floor, Centre Tower 3300 Bloor Street West Toronto, Ontario Canada M8X 2X4 Show facsimile of manufacturer's logo or trademark, as it will appear on the fitting, in the space below



| STATUTORY DEC Registration of I | | |
|---|--|---|
| , David H. Peace, Vice President of Engineering | | |
| (Name and Position, e.g. President, Plant Mana | ger, Chief Engineer) | |
| of Swagelok Company | | |
| (Name of Manufacturer) | | |
| Located at 29500 Solon Road, Solon, Ohio 44139-3492 | (440) 248-4600 | 440-519-7384 |
| (Plant Address) | (Telephone No.) | (Fax No.) |
| do solemnly declare that the fittings listed hereunder, which are subject and Pressure Vessels Regulation, comply with all of the requirement ASME B31.1 and ASME B31.3 for Unlisted Components | ct to the Technical Standar s of | rds and Safety Act, Boilers |
| (Title of recognized North American St | | 2 704 1008 31 01 |
| which specifies the dimensions, materials of construction, pressure/temperate or are not covered by the provisions of a recognized North American s as supported by the attached dat pressure/temperature ratings and the basis for such ratings, the marking | standard and are therefore many which identifies the dimensing of the fitting for identification | nanufactured to comply with ons, material of construction, n and service. |
| I further declare that the manufacture of these fittings is controlled by a quality: which has been verified by the following authority, The British | | nents of 130 900 1.2006 |
| The items covered by this declaration, for which I seek registration, are category C | - Clarida do Molitation | type fittings. In support of |
| this application, the following information and/or test data are attached as follows: | | type mange: in eapport of |
| ISO 9001:2008 Certificate, Catalog Information, Support Documents, Attac | hment B | |
| (drawings, calculations, test reports | s, etc.) | |
| Declared before me atin the | State | of Ohio |
| the day of October AD 20 13. | | |
| Commissioner for Oaths: Lori A. Sarver, Notary Public State of Ohlo, Summit County My Commission Expires April 13, 2015 (Signature) | (Signature of | Declarer) |
| FOR OFFICE USE ON To the best of my knowledge and belief, the application meets the requirements of Technical Standards and Safety Act, Boilers and Pressure Vessels Regulation, CSA Standard B51 and is accepted for registration in Category | f the | Pressure the late Safety Program |
| CRN: 0C15741.25 | REGIST. | ERED |
| Registered by: Rulming You | CIUNE OC 15 | 25 |
| Dated: 00. 22, 2015 | Digged: | |
| NOTE: This registration expires on: | 5 Lines Oct , 3 | 4, 2015 |

Attachment B. Scope for Swagelok RHPS Series Pressure Regulators (RS, RSH, RD, RDH and BS) (Category C)

Product Scope

This document represents the scope of the Swagelok RHPS Series Pressure Regulators (RS, RSH, RD, RDH and BS) covered by this submission for CRN approval. The Swagelok RHPS Series Pressure Regulators (RS, RSH, RD, RDH and BS) were designed and evaluated in accordance with ASME B31.1 for unlisted components and ASME B31.3 for unlisted in components. REGISTRATION OF FITTINGS

Note:

The temperature ratings in the table below in most cases exceed those shown in the product pressure retaining components are designed to be safe at the temperature Taking as demonstrate Code Compliance Summary, but the Swagelok factory must be consulted to determine which seat and seal materials listed in the Typical Product Characteristics section below are suitable for use at this temperature.

V 2 4 2015

Summary Table

| | ure | | | | - | | | |
|-------------------|---------------------------------------|--|---|----------------------|----------------------|----------------------------------|---|---|
| Product Series | Main Pressure Bearing Component | Main Pressure Bearing Material | Port Connections and Sizes | 70.000 | nbient erature | | ximum | Design Code of Construction |
| | Mai | Waterial | | Inlet | Outlet | Inlet | Outlet | |
| RS6 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 3/4" Female ISO/BSP 3/4" ASME B16.5 Flange 3/4" | 1015 psi @ 100 °F | 406 psi @ 100 °F | 1015 psi @ 302 °F | 406 psi @ 302 °F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) |
| RS10 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 1" Female ISO/BSP 1" ASME B16.5 Flange 1" | 1015 psi @ 100 °F | 290 psi @ 100 °F | 1015 psi @ 302 °F | 290 psi @ 302 °F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) |
| RS15 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 1-1/12" Female ISO/BSP 1-1/2" ASME B16.5 Flange 1-1/2" | 1015 psi @ 100 °F | 290 psi @ 100 °F | 1015 psi @ 302 ⁰ F | 290 psi @ 302 °F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) |
| RS20 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 2" Female ISO/BSP 2" ASME B16.5 Flange 2" | 1015 psi @ 100 °F | 290 psi @ 100 °F | 1015 psi @ 302 °F | N290 GSIC @ 302 °F ical Standard ers & Pre | Components) |
| RSH2 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 1/4" | 6800 psi @ 100 °F | 4500 psi @ 100 °F | 6800 psi @ 302 °F | 4500 psi @ 302 °F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) |

| | ure | | | | Maximum Ra | ated Pressur | е | |
|---------|--|--|--|------------------------|---------------------------------|--|--|--|
| Product | Product Series Main Pressure Bearing Material Material | Bearing | Port Connections and Sizes | At ambient temperature | | THE RESERVE THE PARTY NAMED IN COLUMN TWO IS NOT THE PARTY NAMED IN COLUMN TWIND TWO IS NOT THE PARTY NAMED IN COLUMN TWO IS NOT THE PARTY NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NOT THE PARTY NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NA | ximum erature | Design Code of Construction |
| | | | Inlet | Outlet | Inlet | Outlet | | |
| RSH4 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 1/2" Female ISO/BSP 1/2" ASME B16.5 Flange 1/2" | 5800 psi @ 100 °F | 4900 psi @ 100 °F | 5800 psi @ 302 °F | 4900 psi @ 302 °F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) |
| RSH6 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 3/4" Female ISO/BSP 3/4" ASME B16.5 Flange 3/4" | 5800 psi @ 100 °F | 5800 psi @ 100 °F | 5800 psi @ 302 °F | 5800 psi @ 302 ⁰ F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) |
| RSH8 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 1" Female ISO/BSP 1" ASME B16.5 Flange 1" | 5800 psi @ 100 °F | 5700 psi @ 100 °F | 5800 psi @ 302 °F | 5700 psi @ 302 °F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) |
| RSH10 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 1" Female ISO/BSP 1" ASME B16.5 Flange 1" | 5800 psi @ 100 °F | 3625 psi @ 100 °F | 5800 psi @ 302 ⁰ F | 3625 psi @ 302 ⁰ F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) |
| RSH15 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 1-1/12" Female ISO/BSP 1-1/2" | 5800 psi @ 100 °F | 3625 psi @ 100 °F | 5800 psi @ 302 ⁰ F | 3625 psi @ 302 °F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) |
| RSH15 | Body | Stainless Steel (UNS S31603 / ASTM A479) | O C 3 ASME B16.5 Flange 1-1/2" | 5700 psi @ 100 °F | 3625 psi @ 100 °F | @ 100 F | H3625 psiS @ 302 °F Chnical Stand | ASME B31.1 (Unlisted Components) and ASME B31.3. (Unlisted days ar Components) |
| RSH20 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 2" Female ISO/BSP 2" | 5800 psi @ 100 °F | 290 psi @ 100 °F | | oilers & P Safet 290 psi @ 302 °F | ASME B31.19 y (Unisted Components) and ASME B31.3 (Unlisted Components) |
| RSH20 | Body | Stainless Steel (UNS S31603 / ASTM A479) | ASME B16.5 Flange 2" | 5500 psi @ 100 °F | 290 psi @ 100 ⁰ F | 5500 psi @ 100 °F | 290 psi @ 302 ⁰ F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) |

| | ure nt | | | | Maximum Rated Pressure | | | | |
|-------------------|---------------------------------------|---|---|----------------------|----------------------------------|----------------------------------|--|---|--|
| Product Series | Main Pressure Bearing Component | Main Pressure Bearing | Port Connections and Sizes | | nbient erature | District Control | ximum erature | Design Code of Construction | |
| т., | Main B Cor | Material | | Inlet | Outlet | Inlet | Outlet | | |
| RD2 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 1/4" | 5800 psi @ 100 °F | 4500 psi @ 100 ⁰ F | 5800 psi @ 302 °F | 4500 psi @ 302 °F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) | |
| RD6DP | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 3/4" Female ISO/BSP 3/4" ASME B16.5 Flange 3/4" | 1015 psi @ 100 °F | 1015 psi @ 100 °F | 1015 psi @ 302 ⁰ F | 1015 psi @ 302 °F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) | |
| RD10 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 1" Female ISO/BSP 1" ASME B16.5 Flange 1" | 1015 psi @ 100 °F | 1015 psi @ 100 °F | 1015 psi @ 302 °F | 1015 psi @ 302 °F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) | |
| RD15 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 1-1/12" Female ISO/BSP 1-1/2" ASME B16.5 Flange 1- 1/2" | 1015 psi @ 100 °F | 1015 psi @ 100 °F | 1015 psi @ 302 °F | 1015 psi @ 302 °F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) | |
| RD20 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 2" Female ISO/BSP 2" ASME B16.5 Flange 2" | 1015 psi @ 100 °F | 1015 psi @ 100 °F | | 1 1015 psi @ 302 °F nical Standa | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted dsComponents)or | |
| RD25 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 2-1/2" Female ISO/BSP 2-1/2" ASME B16.5 Flange 2- 1/2" | 1015 psi @ 100 °F | 7 4 1015 psi @ 100 °F | 1015 psi @ 302 °F | lers & Pro Safety 1015 psi @ 302 °F | Components) and ASME B31.3 (Unlisted Components) | |
| RD30 | Body | Stainless Steel (UNS S31603 / ASTM A479) | ASME B16.5 Flange 3" | 1015 psi @ 100 °F | 1015 psi @ 100 °F | 1015 psi @ 302 °F | 1015 psi @ 302 °F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) | |
| RD40 | Body | Stainless Steel (UNS S31603 / ASTM A479) | ASME B16.5 Flange 4" | 1015 psi @ 100 °F | 1015 psi @ 100 °F | 1015 psi @ 302 °F | 1015 psi @ 302 °F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) | |

| | ure | | | 1 | е | | | |
|-------------------|---------------------------------------|---|--|---|----------------------|----------------------------------|--------------------------------------|---|
| Product Series | Main Pressure Bearing Component | Main Pressure Port Connections an Bearing Sizes | Port Connections and Sizes | 100000000000000000000000000000000000000 | bient rature | At maximum temperature | | Design Code of Construction |
| п | Mair | Material | | Inlet | Outlet | Inlet | Outlet | |
| RDH6 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 3/4" Female ISO/BSP 3/4" ASME B16.5 Flange 3/4" | 5800 psi @ 100 °F | 5800 psi @ 100 °F | 5800 psi @ 302 °F | 5800 psi @ 302 °F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) |
| RDH6DP | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 3/4" Female ISO/BSP 3/4" ASME B16.5 Flange 3/4" | 5800 psi @ 100 °F | 3335 psi @ 100 °F | 5800 psi @ 302 ⁰ F | 3335 psi @ 302 ⁰ F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) |
| RDH8 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 1" Female ISO/BSP 1" ASME B16.5 Flange 1" | 5800 psi @ 100 °F | 5700 psi @ 100 °F | 5800 psi @ 302 °F | 5700 psi @ 302 °F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) |
| RDH10 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 1" Female ISO/BSP 1" ASME B16.5 Flange 1" | 5800 psi @ 100 °F | 3625 psi @ 100 °F | 5800 psi @ 302 °F | 3625 psi @ 302 ⁰F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) |
| RDH15 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 1-1/12" Female ISO/BSP 1-1/2" | 5800 psi @ 100 °F | 3400 psi @ 100 °F | 5800 psi @ 302 °F | 3400 ps @ 302 °F hnical Standa | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted |
| RDH15 | Body | Stainless Steel (UNS S31603 / ASTM A479) | ASME B16.5 Flange 1- 1/2" | 5700 psi @ 100 °F | 3625 psi @ 100 °F | 5700 psi @ 100 °F | Safety 3625 psi @ 302 °F | Pr(Unlisted Components) and ASME B31.3 (Unlisted Components) |
| RDH20 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 2" Female ISO/BSP 2" | 5800 psi @ 100 °F | 2900 psi @ 100 °F | 5800 psi @ 100 °F | 2900 psi @ 302 ⁰ F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) |
| RDH20 | Body | Stainless Steel (UNS S31603 / ASTM A479) | ASME B16.5 Flange 2" | 5500 psi @ 100 °F | 2900 psi @ 100 °F | 5500 psi @ 100 °F | 2900 psi @ 302 °F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) |

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The products shown in the table below are a part of the above product families and were previously registered under CRN registration number 0C15099.5C

| | ure | Mate | | Maximum Rated Pressure | | | | | |
|-------------------|---------------------------------------|---|--|------------------------|----------------------|-------------------------------|--------------------------------------|---|--|
| Product Series | Main Pressure Bearing Component | Main Pressure Port Connections and Bearing Sizes | | At ambient temperature | | | maximum nperature | Design Code of Construction | |
| | Mair | Material | | Inlet | Outlet | Inlet | Outlet | | |
| RDH25 | Body | Stainless Steel (UNS S31603 / ASTM A479) | ASME B16.5 Flange 2-1/2" | 4060 psi @ 100 °F | 2900 psi @ 100 °F | 4060 p @ 100 | si 2900 psi °F @ 302 °F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) | |
| RDH30 | Body | Stainless Steel (UNS S31603 / ASTM A479) | ASME B16.5 Flange 3" | 4060 psi @ 100 °F | 1900 psi @ 100 °F | 4060 ps @ 100 ° | | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) | |
| RDH40 | Body | Stainless Steel (UNS S31603 / ASTM A479) | ASME B16.5 Flange 4" | 4040 psi @ 100 °F | 1900 psi @ 100 °F | 4040 ps @ 100 ° | si 1900 psi PF @ 302 °F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) | |
| BS10 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 1" Female ISO/BSP 1" ASME B16.5 Flange 1" | 1015 psi @ 100 °F | 290 psi @ 100 °F | 1015 ps @ 302 ⁰ | © 302 °F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted) | |
| RS2 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 1/4" | 5800 psi @ 100 °F | 4500 psi @ 100 °F | 5800 ps @ 302 ⁰ | si 4500 psi | Pr(Unlisted Components) and ASME B31.3 (Unlisted Components) | |
| RS4 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 1/2" Female ISO/BSP 1/2" ASME B16.5 Flange 1/2" | 1015 psi @ 100 °F | 406 psi @ 100 °F | 1015 ps @ 302 ° | | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) | |
| RS8 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 1" Female ISO/BSP 1" ASME B16.5 Flange 1" | 1015 psi @ 100 °F | 406 psi @ 100 °F | 1015 ps @ 302 ° | si 406 psi F @ 302 ⁰ F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) | |
| RD6 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 3/4" Female ISO/BSP 3/4" ASME B16.5 Flange 3/4" | 1015 psi @ 100 °F | 1015 psi @ 100 ⁰F | 1015 ps @ 302 ° | si 1015 psi F @ 302 ºF | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) | |

THIS IS PART OF

Technical Standards & Safety Authority Boilers & Pressure Vessels Safety Program

CRN Oc15741.25

| | ure | | | 1 | Maximum Ra | ated Pressur | е | |
|-------------------|---------------------------------------|---|--|----------------------|------------------------|----------------------|---------------------------------|---|
| Product Series | Main Pressure Bearing Component | Main Pressure Bearing | Port Connections and Sizes | | At ambient temperature | | At maximum temperature | |
| т., | Main | Material | | Inlet | Outlet | Inlet | Outlet | |
| RD8 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 1" Female ISO/BSP 1" ASME B16.5 Flange 1" | 1015 psi @ 100 °F | 1015 psi @ 100 °F | 1015 psi @ 302 °F | 1015 psi @ 302 °F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) |
| BS4 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 1/2" Female ISO/BSP 1/2" ASME B16.5 Flange 1/2" | 1015 psi @ 100 °F | 406 psi @ 100 °F | 1015 psi @ 302 °F | 406 psi @ 302 ⁰ F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) |
| BS8 | Body | Stainless Steel (UNS S31603 / ASTM A479) | Female NPT 1" Female ISO/BSP 1" ASME B16.5 Flange 1" | 1015 psi @ 100 °F | 203psi @ 100 °F | 1015 psi @ 302 °F | 203 psi @ 302 ⁰ F | ASME B31.1 (Unlisted Components) and ASME B31.3 (Unlisted Components) |

Product Illustration



RS(H)2



RS(H)4, 6, 8



RS(H)10, 15, 20

0C15741.2



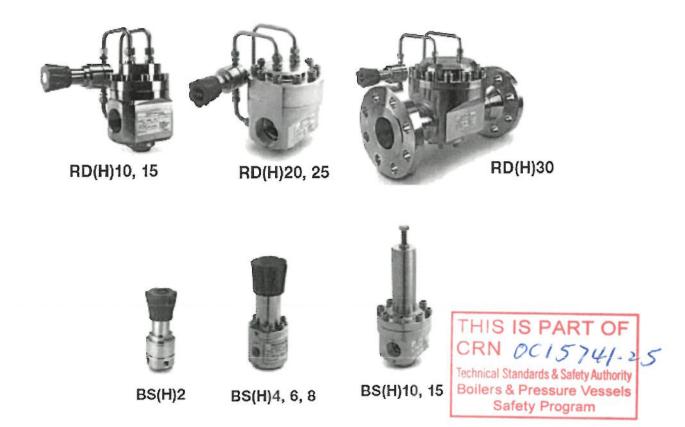
RD2



RD(H)6, 8



RD(H)6DP



Typical Product Characteristics:

Some of the product options listed below affect the pressure-temperature ratings shown in the Summary Table, but in all cases the ratings are less than those shown in the Summary Table. All of the following options are within the scope of this registration:

- Body Seal Materials: FKM, Nitrile, EPDM, FFKM, HNBR
- Diaphragm Materials: FKM, Nitrile, EPDM, FFKM, HNBR, PTFE, 316SS
- Piston Seal Materials: FKM, Nitrile, EPDM, FFKM, HNBR
- Seat Materials: FKM, Nitrile, EPDM, FFKM, HNBR, PCTFE, PEEK, Polyurethane

Some of the product options listed below do not affect the pressure-temperature ratings shown in the Summary Table. All of the following options are within the scope of this registration:

Handle Type
Cleaning options
Panel Mounting
Feedback Loops
Handle color
Anti-tamper
Laser Etching
ASTM G93 cleaning
NACE Components
External Feedback
External Feedback to the Pilot

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Quality System

The Swagelok Company quality system complies with the requirements of BS EN ISO 9001:2008. The Swagelok Company maintains British Standards Institution Certificate of Registration Number FM 01729, which applies to all locations listed on the Certificate. The Swagelok RHPS Series Pressure Regulators (RS, RSH, RD, RDH and BS) are manufactured and assembled at Swagelok Company locations in Solon, Ohio and Tromode, Isle of Man, British Isles.

References

The product catalog does not represent the full scope of registration, but rather details some of the most common options.

RHPS Series Pressure Regulator Catalog MS-02-430, R1

THIS IS PART OF
CRN OCL 5 741.

Technical Standards & Safety Authority
Boilers & Pressure Vessels
Safety Program

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