

POLISH ORIGIN OF THE 565.1

The story of the CD 565.1 starts with the creation of an independent Polish republic at the end of World War I. With that conflict and the Polish-Soviet War resolved by 1921, the new Second Polish Republic prioritized rebuilding its national infrastructure. A critical part of that was telecommunications and railways.

1922-1928: FIRST STANDARD POLISH DESIGNS

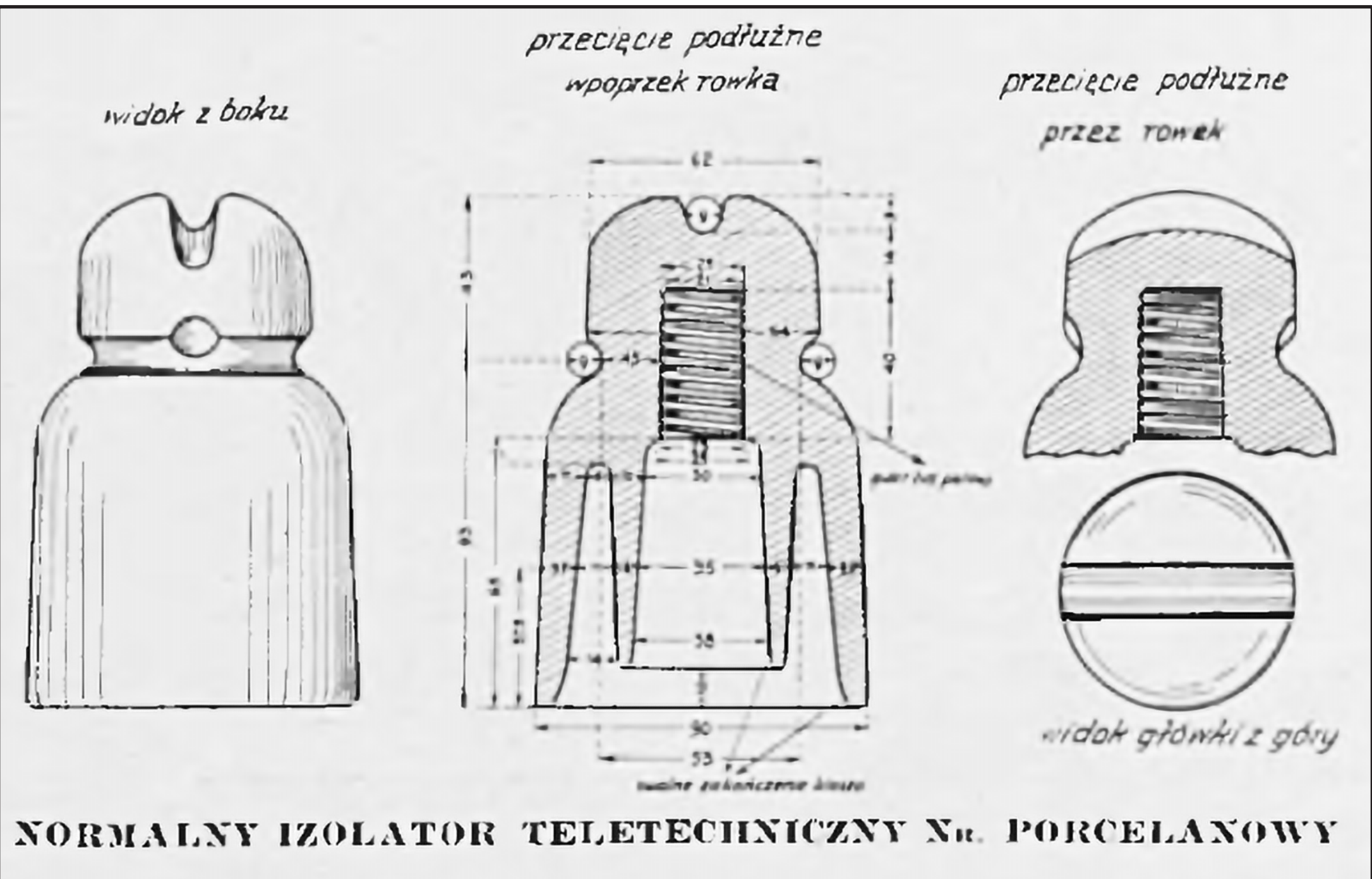
In 1922, the Ministerstwo Poczt i Telegrafów (Poland’s Ministry of Post and Telegraphs, or MPiT) requested three standardized glass communications insulators. These were known by their “type number”, a concept that would persist in Polish design.

- Type 1 - The largest, used “on intercity lines” with conductors of 2-6mm diameter.
- Type 2 - Medium-sized and “are used on pole-mounted lines and subscriber lines in Zone II” with conductors in the 2-4mm range.
- Type 3 - The smallest, used for “feeder lines leading to offices and on subscriber lines” with conductors smaller than 2mm.

We now know these designs as the CD 578.1 (type 1), the CD 566.1 (type 2), and the CD 566.5 (type 3).

A contract for a million of these glass insulators was issued to Juliusz Stolle’s Niemen glassworks. Contracts were also let to other glass houses as well, as examples of these same designs exist from Vitrum Wołomin, Falenica, and Huta Szklana Jabłonna, as well as J. Stolle.

While what we know as the 565.1 wasn’t created as part of the first standard, the idea of three standard communication types laid the groundwork for it to come along later.



Kłyż’s preferred standardized shape appears in the drawing above that was printed as part of his proposal. Key features:

1. Bell-shaped, featuring two skirts, outer and inner
2. A spherical-shaped head, not flat like the old standard, to “prevent snow build-up in winter”
3. A top wire groove, arched to ensure the tangent wire makes as little contact as possible
4. A side wire groove

His proposal became two national standards, known as Polskimi Normami Technicznymi or PNT (“Polish Technical Standard”). The standard for glass insulators (izolatory szklane) became PNT-400 by July 1931. PNT-404, which covered porcelain insulators (izolatory porcelanowe), was ratified a bit later afterward due to some disagreements over base glazing.

In addition to the physical characteristics, an addendum to the standard specified the glass color as “blue or blue-green”. Clear was desired, but the glass companies objected on the basis of cost.

PNT-400 standardized low-voltage insulators in Poland into what we as collectors now call CD 565.1 (type 3), CD 578.7 (type 2), and CD 579 (type 1).

MPiT adopted these before the official standard. “As for the glass insulator, the design adopted as the basis for the standard is a type that has already been in use for several years by the Ministry of Posts and Telegraphs.” That would mean the CD 565.1/578.7/579 went into production around 1928.

POLISH 565.1 STYLES



VITRUM WOŁOMIN AND FALENICA PHOTOS COURTESY NIA WEBSITE & BOB BERRY

SOME VERY EARLY EXAMPLES HAVE ONLY J. STOLLE - “NIEMAN” EMBOSSING

WHY GLASS?

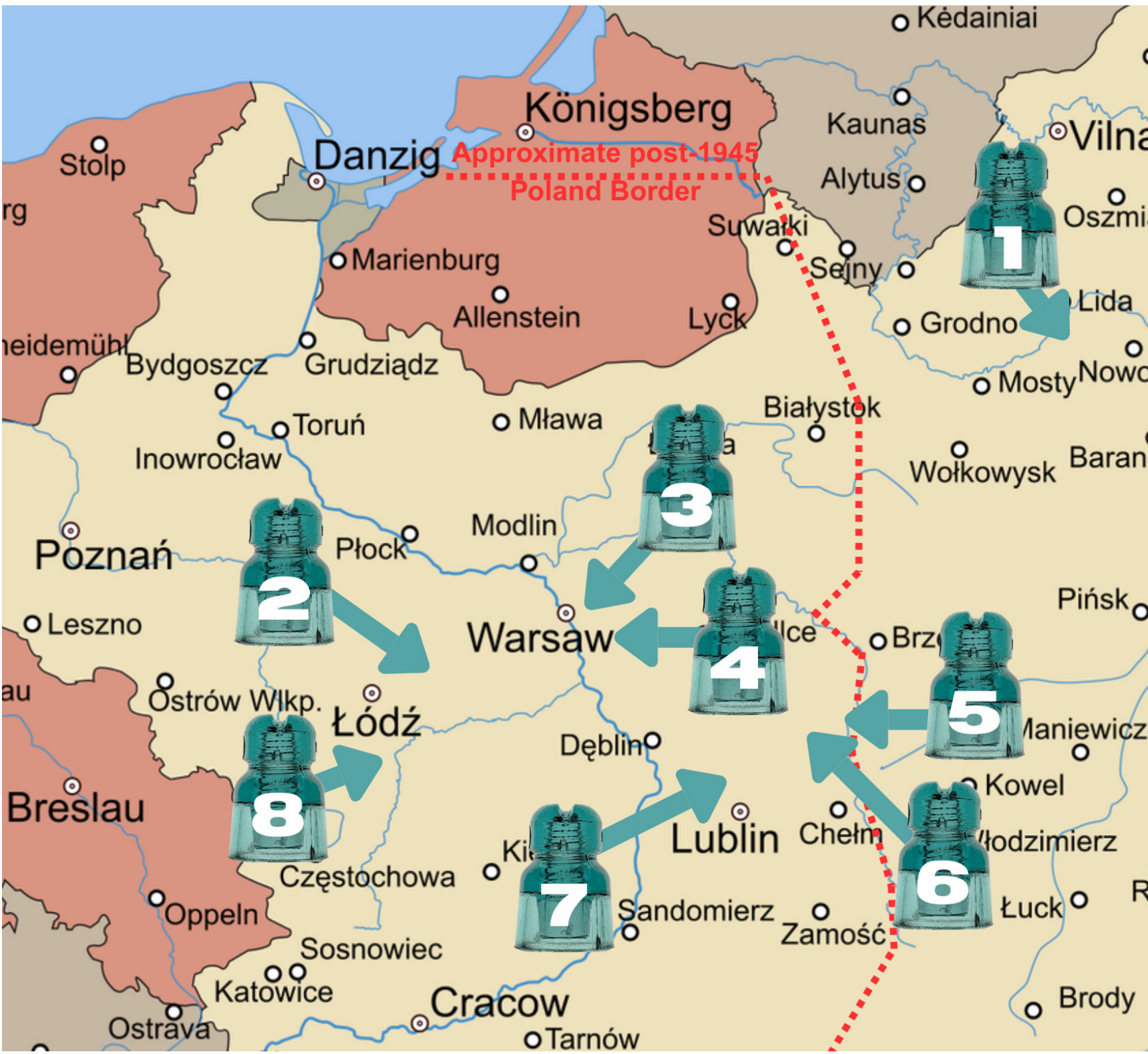
Poland is unusual for the region in that it used a large number of glass insulators. Its neighbors – notably Germany and Austria, and to a lesser extent Russia - much preferred porcelain for its technical superiority. However, Poland had numerous glasshouses before the war, fed by an extensive domestic supply of high purity silica sands and fuel for furnaces – wood, soft coal, and later natural gas, and retained extensive glassmaking knowledge. A technical journal article explains why:

“Glass insulators are used for economic reasons, as they are more than twice as inexpensive as porcelain ones. (...) Glass insulators are becoming increasingly widespread, partly due to the fact that all the raw materials used to manufacture glass are found domestically, whereas the raw materials used for the production of porcelain must be imported from abroad.”



1928-1939: SECOND STANDARD POLISH DESIGNS PNT-400 AND PNT-404

“One need only look into the technical storehouses of the Ministry of Posts and Telegraphs, the communications depots of the Ministry of Military Affairs, and others; there, one will find dozens of insulator variants. This state of affairs creates significant difficulties during the construction and maintenance of these lines. (...) There can be only one answer, namely: it is necessary to establish a few essential types of insulators that meet the required specifications and are binding upon all parties.” - Kazimierz Kłyż, in an April 1928 article in Przegląd Teletechniczny



MANUFACTURERS OF PNT-400 INSULATORS	CDs KNOWN TO EXIST		
	TYPE 3 565.1	TYPE 2 578.7	TYPE 1 579
1 - J. Stolle - Niemen	✓	✓	✓
2 - Huta Rogow (circle R, circle ROGOW)	✓	✓	✓
3 - Vitrum Wołomin (V.W.)	✓	✓	✓
4 - Falenica	✓	✓	✓
5 - Huta Robotnicza Nadbużanka (H.R.N. or H.N.)	✓	✓	✓
6 - Huta Dubeczno (Dubeczno)	✗	✓	✓
7 - Huta Lubartów (HL)	✗	✓	✓
8 - Huta Hortensja	✗	✓	✗