Claim Comparison – Patent Technology Distinction

FRG technology is patentably distinct from prior art requiring an intumescent strip on the surface of a track sidewall. A separate thermal layer is required to be on the surface of metal framing sidewall between an intumescent strip and sidewall to insulate from heat transfer. Older "BlazeFrame" technology required an intumescent strip directly on the metal sidewall surface to gather enough heat to expand material which no longer meets current UL 2079 v.5 test standards established in 2017.

7,814,718 (BlazeFrame) – 10/19/2010

1. A fire retardant head-of-wall assembly configured to seal a linear head-of-wall construction joint or gap when exposed to a heat source, comprising: an elongated sheet-metal footer track; an elongated sheet-metal header track confronting and vertically spaced apart from the footer track, the header track including a web integrally connected to a pair of spaced apart and downwardly extending sidewalls, the web having a top exterior web surface positioned adjacent to a ceiling and a bottom interior web surface, each sidewall having inner and outer sidewall surfaces, each sidewall having an upper sidewall portion adjacent to the web and a lower sidewall portion; an elongated heat expandable *intumescent strip* affixed lengthwise on at least one of the outer *sidewall surfaces* of the pair of sidewalls, the intumescent strip being positioned on the upper sidewall portion, the intumescent strip having an outer strip surface offset from the outer sidewall surface an intumescent strip offset distance; a plurality of sheet-metal studs having upper and lower end portions, the studs being vertically positioned between the spaced apart and confronting footer and header tracks such that the lower end portions are received into the footer track and the upper end portions are received into the header track, each of the upper end portions of the plurality of studs being spaced apart from the bottom interior web surface of the header track a first gap distance that allows for ceiling deflections; and wallboard attached to at least one side of the plurality of studs, the wallboard having a top linear end surface positioned apart from the ceiling a second gap distance that allows for ceiling deflections and defines the linear head-of-wall construction joint or gap, the wallboard having an elongated upper interior wallboard surface in linear contact with the outer strip surface of the elongated intumescent strip.

7,681,365 (BlazeFrame)- 3/23/2010

1. A fire retardant head-of-wall assembly configured to seal a linear head-of-wall construction joint or gap when exposed to a heat source, comprising: an elongated sheet-metal footer track; an elongated sheet-metal header track confronting and vertically spaced apart from the footer track, the header track including a web integrally connected to a pair of spaced apart and downwardly extending sidewalls, the web having a top exterior web surface positioned immediately adjacent to a ceiling and a bottom interior web surface, each sidewall being substantially coplanar and having inner and outer sidewall surfaces, each sidewall having an upper sidewall portion adjacent to the web and a lower sidewall portion; an elongated *intumescent strip* affixed lengthwise on at least one of the outer *sidewall surfaces* of the pair of sidewalls, the intumescent strip being positioned on the upper sidewall portion, the intumescent strip having an outer strip surface offset

from the outer sidewall surface an intumescent strip offset distance; a plurality of sheet-metal studs having upper and lower end portions, the studs being vertically positioned between the spaced apart and confronting footer and header tracks such that the lower end portions are received into the footer track and the upper end portions are received into the header track, each of the upper end portions of the plurality of studs being spaced apart from the bottom interior web surface of the header track a first gap distance that allows for ceiling deflections; and wallboard attached to at least one side of the plurality of studs, the wallboard having a top linear end surface positioned apart from the ceiling a second gap distance that allows for ceiling deflections and defines the linear head-of-wall construction joint or gap, the wallboard having an elongated upper interior wallboard surface in linear contact with and bearing against the outer strip surface of the elongated intumescent strip.

8,136,314 (BlazeFrame) – 3/20/2012

1. A header track for use in a stud wall assembly, comprising: an elongated web having a pair of spaced apart and downwardly extending sidewalls, each sidewall having inner and outer sidewall surfaces, and an elongated heat expandable *intumescent strip* affixed lengthwise on at least one of the outers *sidewall surfaces* of the pair of sidewalls, the intumescent strip having a composition that comprises: (A) from 5 to 95% by weight of expandable graphite; (B) from 1 to 70% by weight of a fire retardant; (C) from 1 to about 50% by weight of an inorganic filler dispersed in a emulsion of polyvinyl acetate or silicone.

8,151,526 (BlazeFrame) – 4/10/2012

1. A fire retardant head-of-wall assembly, comprising: an elongated sheet-metal footer track; an elongated sheet-metal header track confronting and vertically spaced apart from the footer track, the header track including a web integrally connected to a pair of spaced apart and downwardly extending sidewalls, each sidewall having an upper sidewall portion adjacent to the web and a lower sidewall portion; an elongated *intumescent strip* affixed lengthwise on at least one of the outer *sidewall surfaces* of the pair of sidewalls, the intumescent strip being positioned on the upper sidewall portion. A plurality of sheet-metal studs having upper and lower end portions, the studs being vertically positioned between the spaced apart and confronting footer and header tracks such that the lower end portions are received into the footer track and the upper end portions are received into the header track. Wallboard attached to at least one side of the plurality of studs, the wallboard having an elongated upper interior wallboard surface in contact with the outer strip surface of the elongated intumescent strip.

10,626,598 (Safti-Seal) – 4/21/2022

1. A sheet metal framing member in combination with a multi-layer fire safety pressure sensitive adhesive tape configured for use in a fire rate wall assembly, the multi-layer fire safety pressure sensitive adhesive tape comprising a flexible and conformable thermal barrier layer attached to a flexible intumescent material layer, wherein the *thermal barrier layer* comprises a thermoplastic material that is on *a surface of the sheet metal* framing member, and wherein the thermal barrier layer is attached to the intumescent layer such that the *thermal barrier layer is between the sheet*

metal framing member and the intumescent layer, and wherein the thermoplastic material is a foamed thermoplastic that contains a plurality of closed cells, and wherein the thermal barrier layer and the intumescent layer (i) each have a uniform thickness that is about the same, and (ii) are stacked lengthwise to each other to yield the multi-layer fire safety pressure sensitive adhesive tape having a thickness equal to the combined thickness of the thermal barrier layer and the intumescent layer.

11,401,711 (Safti-Seal) – 8/2/2022

1. A bi-layer fire safety adhesive tape comprising a flexible first single layer *closed-cell polymer foam strip adjoined* via an adhesive to a flexible second single layer expandable graphite material strip to yield the bi-layer fire safety adhesive tape.

11. A sheet metal framing member having a piece of bi-layer fire safety adhesive tape thereon, wherein the bi-layer fire safety adhesive tape comprises a flexible first single layer closed-cell polymer foam strip adjoined via an adhesive to a flexible second single layer expandable graphite material strip.

11,512,464 (Safti-Seal) – 11/29/2022

1. A sheet metal framing member in combination with a multi-layer fire safety tape configured for use in a fire rated wall assembly, the multi-layer fire safety tape comprising a flexible thermal barrier layer attached to a flexible intumescent material layer, wherein the intumescent material layer is composed of expandable graphite, and wherein the *thermal barrier layer comprises a thermoplastic material that is on a surface of the sheet metal framing member*, and wherein the thermal barrier layer is *between the sheet metal framing member and the intumescent layer*.

10,406,389 (Cemco) – 9/10/2019

Under Rexam with all claims invalid in consideration of prior art references not supplied by Applicant (Pilz & Cemco)